This is a digital copy of a book that was preserved for generations on library shelves before it was carefully scanned by Google as part of a project to make the world's books discoverable online.

It has survived long enough for the copyright to expire and the book to enter the public domain. A public domain book is one that was never subject to copyright or whose legal copyright term has expired. Whether a book is in the public domain may vary country to country. Public domain books are our gateways to the past, representing a wealth of history, culture and knowledge that's often difficult to discover.

Marks, notations and other marginalia present in the original volume will appear in this file - a reminder of this book's long journey from the publisher to a library and finally to you.

Usage guidelines

Google is proud to partner with libraries to digitize public domain materials and make them widely accessible. Public domain books belong to the public and we are merely their custodians. Nevertheless, this work is expensive, so in order to keep providing this resource, we have taken steps to prevent abuse by commercial parties, including placing technical restrictions on automated querying.

We also ask that you:

+ *Make non-commercial use of the files* We designed Google Book Search for use by individuals, and we request that you use these files for personal, non-commercial purposes.

+ *Refrain from automated querying* Do not send automated queries of any sort to Google's system: If you are conducting research on machine translation, optical character recognition or other areas where access to a large amount of text is helpful, please contact us. We encourage the use of public domain materials for these purposes and may be able to help.

+ *Maintain attribution* The Google "watermark" you see on each file is essential for informing people about this project and helping them find additional materials through Google Book Search. Please do not remove it.

+ *Keep it legal* Whatever your use, remember that you are responsible for ensuring that what you are doing is legal. Do not assume that just because we believe a book is in the public domain for users in the United States, that the work is also in the public domain for users in other countries. Whether a book is still in copyright varies from country to country, and we can't offer guidance on whether any specific use of any specific book is allowed. Please do not assume that a book's appearance in Google Book Search means it can be used in any manner anywhere in the world. Copyright infringement liability can be quite severe.

About Google Book Search

Google's mission is to organize the world's information and to make it universally accessible and useful. Google Book Search helps readers discover the world's books while helping authors and publishers reach new audiences. You can search through the full text of this book on the web at `http://books.google.com/`

FORESTRY
SD
473.2
.U52
W6
S6

A STUDY

HE

BUHR B
a39015 00001527 4b

ONSIN

WOOD-USING INDUSTRIES

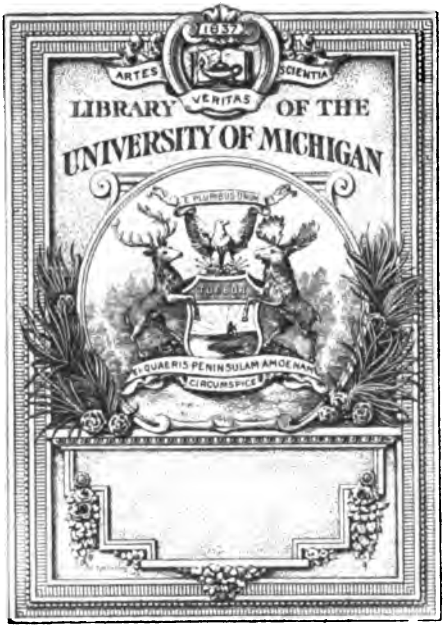
BY FRANKLIN H. SMITH, EXPERT
United States Forest Service

UNDER THE DIRECTION OF
E. M. GRIFFITH,
State Forester, Commonwealth of Wisconsin

AND

H. S. SACKETT
In Charge of Wood Utilization, United States Forest Service

MADISON, WIS.
DEMOCRAT PRINTING CO., STATE PRINTER
1910


1837
ARTES
VERITAS
SCIENTIA
LIBRARY OF THE
UNIVERSITY OF MICHIGAN
E PLURIBUS UNUM
TUEBOR
SI QUAERIS PENINSULAM AMOENAM
CIRCUMSPICE

SD
473.2
.U52
W6
S6

A STUDY
OF THE
WISCONSIN
WOOD-USING INDUSTRIES

---

oward
BY FRANKLIN H. SMITH, EXPERT
United States Forest Service

UNDER THE DIRECTION OF
E. M. GRIFFITH
State Forester, Commonwealth of Wisconsin

AND

H. S. SACKETT
In Charge of Wood Utilization, United States Forest Service

MADISON, WIS.
DEMOCRAT PRINTING CO., STATE PRINTER
1910

TABLE OF CONTENTS

Page
Introduction 5
Wood-using Industries of Wisconsin 9
Kinds and Quantities of Woods used (Table 1) 10
Prices paid for Woods by Different Industries (Table 2) 12
Species Used and their Apportionment by Industries (Table 3) 14
Agricultural Implements 16
Bee Hives and Bee Keepers' Supplies 17
Boats 18
Boxes 20
Chairs 22
Church and School Furnishings 23
Cigar Boxes 24
Coffins and Caskets 25
Excelsior 26
Furniture 27
Handles 29
Musical Instruments 29
Refrigerators 31
Pulp 32
Sash, Doors, Blinds and Interior and Exterior Finish 34
Toys, Wagons and Lawn Furniture 36
Trunks 37
Office, Store and Bank Fixtures and Cabinet Work 37
Vehicles and Vehicle Stock 39
Windmills, Tanks and Silos 40
Woodenware 42
Miscellaneous 43
List of Wood Manufacturers 45
Uses by Species 56

259858

INTRODUCTION

The importance of Wisconsin as a lumber producing and a lumber consuming state has been long apparent, as evidenced by the industrial data gathered for the entire country, though less information concerning the consumption of forest products in the state has been gathered than in the matter of the production. For several years the commonwealth, through the agency of the State Board of Forestry has been urging protection of its forest lands as well as reforestation for the purpose of prolonging the life of the lumber business and increasing the number of industries wherein wood in its various forms enters exclusively or partially into the manufactures. Data showing the number, character, and variety of the products of the wood-using concerns located within the state, and the expenditures for raw material for these products, were not available, and it was with the view of compiling and publishing these data that the State Board of Forestry entered into cooperation with the Office of Wood Utilization of the United States Forest Service for the purpose of collecting them.

Statistics covering the production of lumber and other products of the sawmill and woods of the United States are compiled and published annually by the Bureau of the Census in cooperation with the Forest Service. In 1860 Wisconsin ranked seventh in the list of states arranged according to the quantity of lumber produced. Ten years later fourth place was occupied, third in 1880, second in 1890, first in 1900 and 1904, second in 1905, third in 1906, and fifth in 1907 and 1908. For the last mentioned year figures were furnished by 899 sawmills in Wisconsin, reporting a total production of 1,613,315,000 board feet, or 4.9 per cent of the total output of all the mills in the country. Though showing a decrease in production in comparison with the figures of the preceding year, 1907, Wisconsin retained its relative position among the states for production. The cut of white pine in the state has decreased largely in the last few years, though this loss in production has been offset by the increased output of hemlock and hardwoods. The state ranked second in the cut of white pine, first in hemlock, third in maple, first in birch, basswood, and elm, fifth in ash, and second in tamarack in 1908.

In view of the position of the state as a producing territory, the reports of the wood-using industries should be of much value both to lumber manufacturers and lumber consumers. The figures given in the report indicate the volume of each kind of wood grown both in and out of the state which is used by wood-consuming factories. A comparison reveals the importance to the dependent industries of perpetuating the home supply.

In the report consideration is given only to the use of lumber which by machinery or some other process has been changed in form either wholly or in part from the rough material. No effort was made to embrace in the report that volume of lumber which by mere shaping by hand or tool becomes a part of a structure without first having passed through some stage of manufacture. While sash, doors, blinds, and interior and exterior finish might possibly be construed as an integral part of a building, these products for the purpose of the report have been included as finished manufactures.

Individual reports were asked from all wood manufacturing plants listed in current directories, and this work was followed by personal requests for information where such action became necessary. Generally, the data was furnished without hesitation on the condition that no publication of the figures would be made in such a manner as to reveal the business of any concern.

An attempt was made by providing space on the inquiry form used to collect the data, to ascertain from the manufacturers what methods were employed to utilize waste material. Presumably the difference of opinion which exists as to what constitutes waste, resulted in so few definite replies. Reports received from many manufacturers would indicate that the small pieces left after lumber is cut up at the factory and which are used as fuel are not considered as waste, though it is open to question whether closer utilization of lumber and the use of some other fuel would not prove more economical. The growing employment of dimension stock in furniture and chair factories and by the makers of vehicles and agricultural implements has done much toward lessening the waste at the consuming end. However, inspections made in various factories show a waste of from 5 to 35 per cent of the total volume of lumber consumed, and a conservative estimate places the average waste at 20 per cent. It is believed that this proportion of waste of raw material in many factories could be reduced by working up the cuttings which now go into the firebox or disposing of the material to some manufacturer who is in a position to utilize it in turning out a product of smaller size. The introduction of box factories as adjuncts to sawmills has materially decreased the waste of lumber at many mills.

As an illustration of how large concerns are utilizing what has heretofore been considered waste, the case of a prominent concern in its operation of a sawmill and chemical plant may be cited. After the timber suitable for manufacturing lumber is cut on the tracts owned by the company, all the small and defective hardwoods are felled and together with the tops of the trees down to a 1½ inch limb are cut into lengths easy to handle and hauled to the chemical plant. The wood is then treated and from one cord is secured 60 bushels of charcoal, 10 gallons of wood alcohol, and 145 pounds of acetate of lime. Not only does the company enjoy a source of income from this phase of utilization, but the removal of the slash does much to prevent fires and promotes reforestation or settlement to agriculture as desired.

Through the establishment of the Forest Products Laboratory at Madison, Wisconsin, plans are being worked out by the State Forester for an extended inquiry into the closer utilization of waste, with a view of increasing the profits of the lumbermen and the saving in cost of raw material to the various industries. The faculty of the University of Wisconsin contemplate introducing courses in the training of young men in wood utilization so that within a few years men having intimate knowledge of the qualities and uses of woods may be at the service of the manufacturers.

The State Board of Forestry expects to supplement at an early date the data which has been gathered in this report, by a census of the standing timber in the state. With knowledge of the needs of the manufactures and knowledge of the timber resources, a rational forestry policy can be outlined so that the producing and consuming industries dependent on wood may be perpetuated and enlarged. Not only is it desirable to conserve the forests of the state for their products, but to secure forever the maintenance of the immense water powers on the Wisconsin, Chippewa, Eau Claire, Fox, Menominee, St. Croix, Wolf, and other rivers through the protection of the watersheds. It has been shown by recent investigations carried on by engineers that the water powers of the state approximate one million horse-power, developed and undeveloped—a tremendous natural resource that means much to the commercial life of the commonwealth.

It is hoped that the publication of this report on the wood-using industries may be of more than passing interest to the lumber producer and the lumber consumer of Wisconsin. The report includes the kind and quantity of lumber used in the various industries, the average price paid per thousand feet and the total cost at the factory. To the millman who will analyze the figures there is a chance of discovering new markets for his products; to the manufacturer is present the opportunity of knowing the species that can and are used in his kindred line and so permit of substitution; to the owner of stumpage and the State Board of Forestry detailed information is available as to what are the needs of the state, both present and future for wood in its manufactures.

ACKNOWLEDGMENT

The State Board of Forestry of Wisconsin and the United States Forest Service desire to thank the manufacturers supplying the information in this report for their interest and cooperation in this work. To the many answering requests for information by mail special acknowledgment is made.

WOOD-USING INDUSTRIES OF WISCONSIN

Chiefly by reason of its proximity to raw material, its excellent shipping facilities by rail and water, its geographical position in relation to consuming markets, and the existence of skilled labor, Wisconsin assumes an enviable position among the states wherein wood forms a large part of the manufactures. An inquiry into the wood-using industries of the Badger State reveals the fact that more than 930 million board feet of lumber valued at approximately $20,000,000 is utilized annually in the numerous lines of manufacture carried on. This is but part of the lumber industry of the state, as the figures given do not include the vast volume of material turned out by the sawmills as well as other forest products which are not considered as raw material for further manufacture. The value of the raw material only is set forth; were the labor expended upon it and the cost of other materials with which the lumber is combined, included, however, the total value of the finished products would soar into additional millions. Of the 930 million feet reported, a little more than one-half of that quantity originated in the state. The figures by no means represent the total amount of wood used, as finished products such as staves and heading used by the cooperage trade and complete wheels and gear used in assembling carriages and wagons were not included in the investigation. Neither was there included in the totals the heavy volume of lumber that goes into flooring, ceiling, siding, and other products of the planing mill.

SPECIES.

Forty species, some native to foreign countries alone, are shown in Table I, which follows, exhibiting the quantity of each wood used, the total cost at the factory, and the per cent grown in and out of the state.

The principal uses of the species reported are shown in tabulated form, beginning on page 58. It was not found practicable to extend the uses so as to show for what part or parts a certain wood is employed in the manufacture of an article, but the arrangement is such as to permit of a general reference.

TABLE I.—*Kinds of Wood Used, Quantity of each, with Total Cost, and the Per Cent. Grown in the State and Out.*

Species.	Feet used. B. M.	Cost at factory.	Grown in Wisconsin. (Per cent.)	Grown outside of Wisconsin. (Per cent.)
Spruce	164,458,000	$3,123,598	28	72
Western Pine	79,220,000	2,484,155	...	100
Oak, red and white	55,349,000	2,259,691	29	71
White Pine	101,029,000	2,051,020	71	29
Hemlock	150,698,000	1,814,405	67	33
Basswood	77,054,000	1,444,612	90	10
Birch	75,181,000	1,316,139	88	12
Maple	49,786,000	1,125,356	52	48
Elm	38,180,000	881,346	77	23
Yellow Pine	21,099,000	638,369	...	100
Ash	14,249,000	377,194	80	20
Cypress	9,679,000	352,948	...	100
Oak, quartered	5,005,000	342,092	10	90
Hickory	5,075,000	311,225	...	100
Poplar	13,112,000	306,290	61	39
Balsam	26,090,000	286,329	55	45
Cottonwood	5,804,000	256,217	...	100
Douglas Fir	5,002,000	180,815	...	100
Norway Pine	7,505,000	124,350	84	16
Beech	6,431,000	106,485	43	57
Western Spruce	3,287,000	101,319	...	100
Gum	3,497,000	85,385	...	100
Chestnut	2,868,000	74,206	...	100
Mahogany	560,000	71,955	...	100
Jack Pine	5,150,000	58,850	76	24
Tamarack	2,480,000	25,924	90	10
Tupelo Gum	855,000	20,075	...	100
Spanish Cedar	105,000	17,990	...	100
Cedar	310,000	11,140	63	37
Cherry	153,000	10,160	...	100
Butternut	610,000	9,230	100	...
Walnut	72,000	5,360	...	100
Redwood	113,000	4,740	...	100
Sycamore	155,000	4,240	...	100
English Oak	10,000	3,500	...	100
Red Cedar	40,000	2,109	...	100
Circassian Walnut	5,000	1,750	...	100
French Walnut	5,000	1,000	...	100
Willow	100,000	970	100	...
Rosewood	1,000	500	...	100
Total	930,382,000	$20,293,034*	51	49

* The average price per thousand feet for all the lumber reported was $21.81.

Table I shows that of the 930,382,000 feet used, at a total cost of $20,293,034, 51 per cent of the total quantity, or 474,494,820 feet, was cut from the forests of the state and 49 per cent, or 455,887,180 feet, was cut in other states or countries. When the figures on the quantity grown in the state and out are considered in connection with the position Wisconsin holds in comparison with other lumber producing states, a discrepancy seemingly appears. However, it is partially explained by the fact that 72 per cent, or 118,204,000 feet, of spruce (Picea mariana) and 79,220,000 feet of western pine used, is credited to the volume of wood cut in other states, and which greatly swells the total amount of lumber imported into the state. The term "western pine" as given in the table includes the several species of pine grown in the Rocky Mountain and Pacific Coast states, and embraces the true western white pine (Pinus monticola), the sugar pine (Pinus lambertina), and the western yellow pine (Pinus ponderosa), it being impracticable to segregate them under certain commercial conditions. While Wisconsin produces sufficient white pine to meet the needs of its manufactures, the cheapness of the western pine and its quality has resulted in its wider use, particularly in the sash, door and millwork industry. Of the native woods, 67 per cent of the hemlock, 90 per cent of the basswood, 88 per cent of the birch, 52 per cent of the maple, 77 per cent of the elm, 80 per cent of the ash, 100 per cent of the butternut, and 84 per cent of the Norway pine used, originated in the state. As a matter of fact the manufacturers of the state draw their supplies of lumber from every section of the country, freight rates permitting the stock to be turned into finished products and these products shipped in many instances into the same sections from which the material was drawn.

INDUSTRIES.

For the purposes of this report the manufactures of Wisconsin are separated into twenty-one industries. A number of other lines where but one or perhaps two concerns are engaged in the same business have been grouped under the head of "miscellaneous." Considerable difficulty was encountered in logically distinguishing between the several industries, as in the case of factories turning out interior and exterior finish and those producing office and store fixtures. The divisions have been made as plain as possible, and no confusion should exist in an examination of the compilations by industries. Table II shows the average price paid in each industry for all the species used, together with the per cent of the total number of feet consumed by each industry.

TABLE II.—*Wood-Using Industries, Average Prices Paid for Lumber at the Factories, and the Per Cent. which each Industry Used of the Total Quantity.*

Industries.	Average price paid for lumber at the factory per 1,000 feet. B. M.	Apportionment of the total quantity of lumber among the industries (Approximate per cent.)
Agricultural implements	$32 54	1.59
Bee hives and bee keepers supplies	22 97	.49
Boats	46 64	.29
Boxes	13 09	12.82
Chairs	28 43	5.26
Church and school furnishings	33 39	.47
Cigar boxes	35 51	.56
Coffins and caskets	24 42	.48
Excelsior	9 89	.90
Furniture	25 22	5.20
Handles	18 48	.18
Musical instruments	41 76	.16
Office, store and bank fixtures and cabinet work	44 12	.64
Pulp	15 54	33.35
Refrigerators	21 66	1.19
Sash, doors, blinds and interior and exterior finish	30 19	18.72
Toys, wagons and lawn furniture	24 84	.59
Trunks	23 11	1.24
Vehicles and vehicle stock	41 02	4.48
Windmills, tanks, and silos	36 05	1.03
Woodenware	14 05	6.67
Miscellaneous	25 87	3.70

It will be noted that three of the industries listed in Table II utilized nearly two-thirds, or 64.89 per cent to be exact, of the total quantity of raw material reported. The largest of these is the pulp industry consuming 33.35 per cent, followed by the sash, door and millwork factories credited with 18.72 per cent and the box making plants using 12.82 per cent. The average prices per thousand feet paid for raw material by the pulp and box concerns are among the lowest, $15.54 and $13.09 respectively. The nominal prices are accounted for by the fact that in the pulp industry the material is utilized in the form of bolts and logs upon which no charge of manufacture into lumber is added, while in the box industry low grade lumber is employed chiefly, and sometimes even the waste of the sawmill is utilized. In the manufacture of sash, doors and millwork a high grade of lumber, clear or select stock generally, is necessary and which brings the average cost up to $30.19 a thousand feet. The smallest of all average prices is that paid by the manufacturers of excelsior—$9.89—and, as in the case of the pulp mills, low grade bolts or logs are used exclusively. The average price paid by concerns making office, store and bank fixtures and cabinet work is increased largely by the cost of imported woods such as mahogany, rosewood, and foreign grown oak and walnut. The price of $44.12 would be considerably reduced were native woods alone included in the tabulation. The clear material demanded in the construction of boats large and small brings up the average cost of lumber in that industry to $43.64, which is slightly more than the average price—$41.02—paid for material by the manufacturers of vehicles and vehicle stock. To the diminishing supply of hickory and its consequent enhancing value can be partly attributed the high average cost in the vehicle industry.

DISTRIBUTION OF SPECIES.

The per cent of the different species used by the several industries classified in the report is given in Table III, the purpose of the tabulation being to show clearly the extent to which each of the species enters into the manufactured products. Basswood is found used, as indicated in the table, in more industries than any other of the species enumerated. Twenty out of the twenty-two industries report the employment of basswood, ranging from .03 per cent of the total number of feet consumed by the miscellaneous manufactures to 33.51 per cent by the woodenware line, the two exceptions being the pulp and handle industries. Of the other native woods, sixteen industries report the use of ash, fourteen of birch, sixteen of elm, ten of hemlock, fifteen of maple, fourteen of oak, six of spruce, six of tamarack, and seventeen of white pine. The use of ash is rather uniformly distributed, as is the case with elm. The bulk of the birch used, however, is in the sash, door, and millwork, woodenware, box, chair, and furniture lines. In the manufacture of pulp and boxes 89.07 per cent of the hemlock is utilized, while 99.66 per cent of all the northern spruce reported goes into the same manufactures, the pulp industry alone taking 99.50 per cent. The furniture and chair factories are large consumers of maple, 34.48 per cent being used by the former and 18.85 per cent by the latter industry. Oak is used mainly by the manufacturers of sash, doors, and millwork, vehicles and vehicle stock, chairs, and furniture. Of tamarack, 70.57 per cent goes into boxes and 16.73 per cent into woodenware. Into boxes also goes 50.21 per cent of all the white pine used, with the sash and door factories taking 22.58 per cent. The last mentioned industry also uses 94.89 per cent of the western pine, 59.05 per cent of the yellow pine, and 97.72 per cent of the western spruce reported. The use of willow is alone reported by the woodenware factories.

TABLE III.—*Kinds of Wood Used and Per Cent Apportionment Among the Industries.*

Species.	Agricultural implements.	Bee hives and beekeepers' supplies.	Boats.	Boxes.	Chairs.	Church and school furnishings.	Cigar boxes.	Coffins and caskets.	Excelsior.	Furniture.	Handles.	Musical instruments.	Office, store and bank fixtures and cabinet work.	Pulp.	Refrigerators.	Sash, doors, blinds, and interior and exterior finish.	Toys, wagons, and lawn furniture.	Trunks.	Vehicles and vehicle stock.	Windmills, tanks and silos.	Woodenware.	Miscellaneous.	Total per cent.
Ash	1.58		1.40	5.87	5.26	1.56				8.62		.01	1.25		30.18	16.29	2.25	.70	7.16	.87	8.99	8.01	100.00
Balsam				5.75										94.25									100.00
Basswood	2.46	3.11	.10	17.54	1.43	.44	3.27	.68	4.67	3.45		.03	1.00		.32	6.41	1.75	10.54	1.34	.80	33.51	7.15	100.00
Beech	4.73			45.87	29.81	.47				7.15									.08			12.44	100.00
Birch	.64		.03	20.75	11.56	.55				13.92		.05	1.79		1.21	17.92	1.07		1.71		20.78	8.02	100.00
Butternut				81.98		8.20							.82			3.28					4.10	1.64	100.00
Cedar			74.19																		25.81		100.00
Cherry													21.57									78.43	100.00
Chestnut						.87		66.81		6.80		21.27	3.48			.77							100.00
Circassian Walnut													100.00										100.00
Cottonwood	11.37			5.17						1.29						.09	.76	.52	79.50		1.30		100.00
Cypress			3.32										.57		.41	81.08				8.27	3.10	3.25	100.00
Douglas Fir	.70		6.74										1.10			42.48			.10	47.78		1.10	100.00
Elm	1.93		.17	2.17	27.86	2.38	3.95			6.49		.82	.02		8.38	4.09	3.60	2.99	13.53		17.33	4.29	100.00
English Oak													100.00										100.00
French Walnut													100.00										100.00
Gum	24.02			5.72	11.72	1.83	1.69			17.01		1.43	.60			4.58	6.95		19.02		2.86	2.57	100.00
Hemlock			.07	11.72						2.31				77.35	.83	4.56	.03			.10	.01	3.02	100.00
Hickory	.20																		99.29			.51	100.00
Jack Pine				88.35																	11.65		100.00
Mahogany			.53		19.64	.86				28.93		.36	32.14			10.00			1.79			6.25	100.00
Maple	4.13			3.43	18.85	2.03				34.48	2.61	.27	.37		.50	8.53	2.47		9.00	.23	5.95	7.15	100.00
Norway Pine	7.99			61.63												23.32				4.06		3.00	100.00
Oak	2.32		1.58		24.50	1.99		.44		12.13	.45	.09	2.55		.52	26.00			26.23	.52		.78	100.00
Oak, quartered					48.35	3.00				28.81		.20	12.19			7.45							100.00

Poplar	1.19			10.76			1.21		36.50	.04		.51	.38	18.98		1.01	.32		10.72		7.53	10.85	100.00
Redwood			2.66													22.12						75.22	100.00
Rosewood													100.00										100.00
Red Cedar			47.50														2.50			50.00			100.00
Spanish Cedar							100.00																100.00
Spruce			.07	.16								.12		99.50		.15							100.00
Spruce, western													.76			97.72				1.52			100.00
Sycamore	87.10														12.90								100.00
Tamarack	4.03		3.23	70.57												2.42				3.02	16.73		100.00
Tupelo Gum							100.00																100.00
Walnut										48.39		16.13	35.48										100.00
Western Pine								.06								94.89						5.05	100.00
White Pine	.75	2.10	.24	50.21		.05		1.71		1.20		.03	.47	3.00	.29	22.58		2.16	.09	4.07	6.85	4.20	100.00
Willow																					1.00		100.00
Yellow Pine	21.63		.06	1.66									2.16		1.42	59.05			11.08	2.18		.76	100.00

AGRICULTURAL IMPLEMENTS.

In taking up the industries individually, Table IV sets forth in detail the quantity, average and total cost, both of the wood grown in and outside of the state, of the seventeen species used in the manufacture of agricultural implements and farm tools. Several of the largest manufacturers of implements in the United States are located in Wisconsin and their products covering practically everything used in tilling the soil and harvesting crops find their way into nearly every country in the world. It is one of the lines which witnesses an increasing volume of business each year. The amount of wood which enters into the construction of many of the implements has been reduced in recent years by the substitution of steel or other metal where possible for wooden parts. Yellow pine leads in both quantity and total price paid as reported by the manufactures, 4,564,000 feet at a total cost of $144,283 being used annually. Of the total amount of all kinds of lumber used, 34 per cent was grown in and 66 per cent out of the state. More than 1,000,000 feet each of basswood, maple, and oak were utilized, and these woods in addition to yellow pine constituted more than two-thirds of the total quantity reported. For oak the average price of $46.36 is given, which is exceeded by but one other average price—$50.08 for Douglas fir. A relatively small amount of fir is reported, however. Hickory was widely used in the implement trade until its scarcity and high price resulted in species more common and costing less being adopted. Only 10,000 feet of hickory valued at $45 a thousand feet was reported. Much of the yellow pine, maple, oak, and elm going into the implement plants is cut to dimension by the sawmills on specifications furnished by the manufacturers. Of maple, 856,000 feet were bought in Wisconsin and 1,200,000 feet outside of the state, most of the latter coming from Michigan. A difference of but twenty-five cents in the average price paid is shown for the stock originating in and out of the state. The oak used and grown in Wisconsin cost an average of $39.67 a thousand feet, while for the 1,055,000 feet cut in other states $47.82 is the average price given. The variance in the average price of the oaks is explained by the fact that much of the oak grown outside of the state and which originated in Indiana, Tennessee, Kentucky, and Arkansas was dimension stock and of high grade. Comparatively little low grade lumber is used, as the wooden parts of nearly all implements are built to withstand heavy and sudden strains.

TABLE IV.—*Agricultural Implements.*

SPECIES.	Quantity used annually. (Feet B. M.)	Average cost at factory per M. B. M.	Total cost at factory (f. o. b.).	GROWN IN WISCONSIN.				GROWN OUTSIDE WISCONSIN.			
				Feet.	Per cent.	Average cost at factory per M.	Total cost at factory (f. o. b.).	Feet.	Per cent.	Average cost at factory per M.	Total cost at factory (f. o. b.).
Yellow Pine	4,564,000	$31.61	$144,283	....	....	......	....	4,564,000	100	$31.61	$144,283
Basswood	1,892,000	37.29	70,560	1,585,000	84	$37.09	$58,795	307,000	16	38.32	11,765
Maple	2,056,000	30.56	62,838	856,000	42	30.71	26,285	1,200,000	58	30.46	36,553
Oak	1,285,000	46.36	59,575	230,000	18	39.67	9,125	1,055,000	82	47.82	50,450
Elm	737,000	36.61	27,001	687,000	93	36.54	25,101	50,000	7	38.00	1,900
Cottonwood	660,000	38.14	25,172	....	....	......	....	660,000	100	38.14	25,172
White Pine	754,000	25.55	19,263	404,000	53	26.15	10,563	350,000	47	24.86	8,700
Gum	840,000	22.22	18,665	....	....	......	....	840,000	100	22.22	18,665
Birch	484,000	29.18	14,125	484,000	100	29.18	14,125	....	....	......	....
Norway Pine	600,000	20.50	12,300	400,000	67	20.50	8,200	200,000	33	20.50	4,100
Ash	225,000	39.67	8,925	75,000	33	33.00	2,475	150,000	67	43.00	6,450
Beech	304,000	20.80	6,322	218,000	72	18.74	4,086	86,000	28	26.00	2,236
Poplar	155,000	37.90	5,875	....	....	......	....	155,000	100	37.90	5,875
Sycamore	135,000	28.00	3,780	....	....	......	....	135,000	100	28.00	3,780
Tamarack	100,000	19.00	1,900	100,000	100	19.00	1,900	....	....	......	....
Douglas Fir	35,000	50.08	1,753	....	....	......	....	35,000	100	50.08	1,753
Hickory	10,000	45.00	450	....	....	......	....	10,000	100	45.00	450
Total	14,836,000	$32.54	$482,787	5,039,000	34	$31.88	$160,655	9,797,000	66	$32.88	$322,132

BEE HIVES AND BEE KEEPERS' SUPPLIES.

The raising of bees for honey not only in Wisconsin but in other states of the central west has developed into a demand for apiary supplies that is catered to by five concerns and which is in itself a distinct line of manufacture. The articles manufactured are made almost exclusively of wood, and include hives, honey sections, and shipping cases. A total of 4,524,000 feet costing $103,927 in the aggregate was reported used annually in this line. Only two species—white pine and basswood—were used, 2,126,000 feet of the first and 2,398,000 of the last mentioned wood being reported. Of the total number of feet reported, 56 per cent was grown in Wisconsin and 44 per cent in other states. Nearly $1 more was paid a thousand feet for the white pine cut outside of the state than in, and $2.81 a thousand feet more for the basswood. About all the material utilized by the manufacturers was No. 1 or No. 2 common lumber, though in one instance a factory reported buying its material in both lumber and bolts.

TABLE V.—*Bee Hives and Bee Keepers' Supplies.*

SPECIES.	Quantity used annually. (Feet B. M.)	Average cost at factory per M. B. M.	Total cost at factory. (f. o. b.)	GROWN IN WISCONSIN.				GROWN OUTSIDE WISCONSIN.			
				Feet.	Per cent.	Average cost at factory per M.	Total cost at factory (f. o. b.).	Feet.	Per cent.	Average cost at factory per M.	Total cost at factory (f. o. b.).
White Pine	2,126,000	$26 48	$56,299	1,126,000	53	$26 02	$29,299	1,000,000	47	$27 00	$27,000
Basswood......	2,398,000	19 86	47,628	1,398,000	58	18 69	26,128	1,000,000	42	21 50	21,500
	4,524,000	$22 97	$103,927	2,524,000	56	$21 96	$55,427	2,000,000	44	$24 25	$48,500

Attention is directed to the fact that in a number of instances, as in the case of Table V, a lower average price is reported paid for the same grades of lumber sawed in Wisconsin than for the same grades and species manufactured in Michigan or Minnesota. This is partially explained by the many factories which operate a small sawmill as part of the plant and which secure logs from the nearby farmers and settlers. The number of logs available is not large enough to warrant shipping them any great distance, and they are bought at a nominal price. The lumber sawed from these logs and entering into the manufactured product is consequently reported as costing less than if the lumber was secured under other conditions.

BOATS.

The term boats is a broad one and as applied to the figures in Table VI comprehends craft of all descriptions such as row boats, sail boats, launches, canoes, scows, barges, steam boats, and other vessels of heavy tonnage. The numerous lakes and streams in Wisconsin furnish ideal recreation places and the boat industry is followed by many and is growing each year. On the other hand the building of large wooden vessels is on the decline, as the steel hull is preferred by owners. In the building of small boats and vessels approximately 2,669,000 feet of lumber, costing $116,487 in the aggregate is reported used annually. Of this number of feet, Wisconsin sawmills furnished 47 per cent and mills in other states 53 per cent. The average cost a thousand feet of all the lumber reported is $43.64, a figure which is next to the highest given by any of the industries, and which is due solely to the clear lumber necessary in the construction of boats. Oak is the principal species used, 847,000 feet having been bought at a total cost of $41,056, at an average price of $48.47 a thousand feet. The amount grown in and outside the state is nearly equally divided. Cypress amounting to 321,000 feet and Douglas fir amounting to 337,000 feet also were reported. For cypress the average price paid a thousand feet was $50.55, and for fir $35.67. Other woods used and bringing a high average cost included white pine, cedar, ash, spruce, elm, red cedar, and redwood. All of the ash, spruce, basswood, and birch, and nearly all of the white pine was reported as having originated within the state.

TABLE VI.—*Boats.*

SPECIES.	Quantity used annually. (Feet B. M.)	Average cost at factory per M. B. M.	Total cost at factory (f. o. b.)	GROWN IN WISCONSIN.				GROWN OUTSIDE WISCONSIN.			
				Feet.	Per cent.	Average cost at factory per M.	Total cost at factory (f. o. b.).	Feet.	Per cent.	Average cost at factory per M.	Total cost at factory (f. o. b.).
Oak	847,000	$48.47	$41,056	400,000	47	$46.75	$18,700	447,000	53	$50.01	$22,356
Cypress	321,000	50.55	16,225					321,000	100	50.55	16,225
Douglas Fir	337,000	35.67	12,020					337,000	100	35.67	12,020
White Pine	247,000	42.50	10,498	178,000	72	39.23	6,983	69,000	28	50.94	3,515
Cedar	230,000	44.61	10,260	115,000	50	44.61	5,130	115,000	50	44.61	5,130
Ash	200,000	48.00	9,600	200,000	100	48.00	9,600				
Spruce	104,000	46.15	4,800	104,000	100	46.15	4,800				
Elm	65,000	40.84	2,655	40,000	62	41.63	1,655	25,000	38	40.00	1,000
Basswood	75,000	29.33	2,200	75,000	100	29.33	2,200				
Hemlock	100,000	20.00	2,000	50,000	50	20.00	1,000	50,000	50	20.00	1,000
Tamarack	80,000	20.63	1,650	80,000	100	20.63	1,650				
Red Cedar	19,000	66.26	1,259					19,000	100	66.26	1,259
Birch	25,000	38.00	950	25,000	100	38.00	950				
Mahogany	3,000	190.00	570					3,000	100	190.00	570
Yellow Pine	13,000	40.69	529					13,000	100	40.69	529
Redwood	3,000	71.66	215					3,000	100	71.66	215
Total	2,669,000	$43.64	$116,487	1,267,000	47	$41.57	$52,668	1,402,000	53	$45.52	$63,819

BOXES.

The box industry as shown in Table VII is one of the three largest in Wisconsin in point of consumption of lumber, being exceeded in the volume of material used only by the pulp and the sash, door, and millwork lines. The finished product of the box factories is by no means confined to the use of the manufactures of the state, as hundreds of carloads of box shooks or knockdown boxes are shipped into territory within a radius of 250 miles or more. These packages laden with goods of various material find their way into the remotest countries. The box industry is closely allied with sawmill operations, because many

TABLE VII.—*Boxes.*

SPECIES.	Quantity used annually. (Feet B. M.)	Average cost at factory per M. B. M.	Total cost at factory (f. o. b.).	GROWN IN WISCONSIN.				GROWN OUTSIDE WISCONSIN.			
				Feet.	Per cent.	Average cost at factory per M.	Total cost at factory (f. o. b.).	Feet.	Per cent.	Average cost at factory per M.	Total cost at factory (f. o. b.).
White Pine..	50,725,000	$14.16	$718,587	35,300,000	70	$14.04	$495,500	15,425,000	30	$14.46	$223,087
Basswood ...	13,515,000	14.58	196,880	11,065,000	82	14.16	156,680	2,450,000	18	16.20	39,700
Hemlock	17,657,000	11.08	195,663	14,957,000	85	11.09	165,863	2,700,000	15	11.03	29,800
Birch	15,597,000	12.30	191,946	12,297,000	79	11.72	144,121	3,300,000	21	14.49	47,825
Jack Pine....	4,550,000	11.88	54,050	3,300,000	73	12.21	40,300	1,250,000	27	11.00	13,750
Norway Pine	4,625,000	11.35	52,500	3,950,000	85	11.03	43,575	675,000	15	13.22	8,925
Beech	2,950,000	14.41	42,500	2,075,000	70	14.58	30,250	875,000	30	14.00	12,250
Poplar	1,400,000	12.29	17,200	....	....	......	....	1,400,000	100	12.29	17,200
Tamarack ...	1,750,000	9.29	16,250	1,500,000	86	9.67	14,500	250,000	14	7.00	1,750
Balsam	1,500,000	10.67	16,000	1,500,000	100	10.67	16,000	....	....	......	....
Maple	1,708,000	8.58	14,650	1,658,000	97	8.44	14,000	50,000	3	13.00	650
Ash	836,000	12.65	10,575	836,000	100	12.65	10,575	....	....	......	....
Elm	829,000	12.50	10,362	829,000	100	12.50	10,362	....	....	......	....
Butternut ...	500,000	12.50	6,250	500,000	100	12.50	6,250	....	....	......	....
Yellow Pine..	350,000	16.00	5,600	....	....	......	....	350,000	100	16.00	5,600
Cottonwood .	300,000	16.67	5,000	....	....	......	....	300,000	100	16.67	5,000
Spruce	275,000	17.50	4,812	150,000	54	17.08	2,562	125,000	46	18.00	2,250
Gum	200,000	16.50	3,300	....	....	......	....	200,000	100	16.50	3,300
Total ...	119,267,000	$13.09	$1,561,575	89,917,000	75	$12.80	$1,150,538	29,350,000	25	$14.00	$411,087

of the factories are adjuncts to the mills and permit of the utilization of much low grade lumber that would otherwise go into the burners. A total of 119,267,000 feet, for which a total cost of $1,561,575 is reported, are used approximately each year. Of the aggregate number of feet reported, 75 per cent was grown in and 25 per cent outside the state. Altogether eighteen species, of which fifteen are indigenous to the state, are shown to have been used. White pine is far in the lead in the species used, with a total of $50,725,000 feet utilized for which an average price of $14.16 a thousand feet or a total of $718,537 was paid.

A difference of forty-two cents is noticeable in the average price a thousand feet paid for the white pine grown in Wisconsin and that coming from Michigan and Minnesota. The fifty million feet of white pine that went into boxes formed 50.21 per cent of the white pine reported in all the manufactures. The average price a thousand feet paid for the 11,065,000 feet of basswood grown in the state was $14.16, while for the 2,450,000 feet grown outside $16.20 was paid. Attention is directed to several other species where a wide difference exists in the average price paid for wood originating in and out of the state. The lowest average price paid was for maple—$8.58 a thousand feet; the highest average price was for spruce—$17.50 a thousand feet. The average price a thousand feet for all Wisconsin lumber reported used was $12.80, compared with $14.00 for all lumber purchased outside the state.

Data furnished by C. A. Stafford, manager of the National Association of Box Manufacturers, Chicago, show the use of an additional 58,650,000 feet of lumber by the box manufacturers of Wisconsin, bringing the total for the industry up to 177,917,000 feet. The figures given cover the consumption at the following plants: Girard Lumber Co., Dunbar; Heddles Lumber Co., Edgerton; C. E. Bates, Fond du Lac; Strange-Ellis Lumber Co., Grand Rapids; Gilkey and Anson Co,, Merrill; M. Hilty Lumber Co., Milwaukee; Campbell and Cameron Co., Oshkosh; John S. Owen Lumber Co., Owen; Medford Veneer Co., Medford; C. J. Timms, Ripon; Goodwille Bros., Wausau; Wausau Box and Lumber Co., Wausau, and Wisconsin Box Co., Wausau.

CHAIRS.

The manufacture of chairs in Wisconsin constitutes a large industry within itself and is entirely distinct from that of furniture making. Its center may truly be said to be Sheboygan, Sheboygan County, where are located several of the largest factories of their kind and whose product is shipped throughout the United States and to foreign countries. Every sort of a chair from the cheapest to the most expensive is turned out in these factories. In this industry, the figures for which are given in Table VIII, approximately 48,951,000 feet of lumber costing an average of $28.43 a thousand feet, or a total of $1,391,801, was reported used. Ten species in all were reported, with plain red and white oak predominating. The table shows 3,825,000 feet of oak bought at an average price of $40.50 a thousand feet within the state, and 9,737,000 feet at an average price of $37.54 a thousand feet bought outside of the state. Elm is next in importance to oak to the chair

TABLE VIII.—*Chairs.*

SPECIES.	Quantity used annually. (Feet B. M.)	Average cost at factory per M. B. M.	Total cost at factory (f. o. b.).	GROWN IN WISCONSIN.				GROWN OUTSIDE WISCONSIN.			
				Feet.	Per cent.	Average cost at factory per M.	Total cost at factory (f. o. b.).	Feet.	Per cent.	Average cost at factory per M.	Total cost at factory (f. o. b.).
Oak	13,562,000	$38.37	$520,430	3,825,000	28	$40.50	$154,910	9,737,000	72	$37.54	$365,520
Elm	10,638,000	24.32	258,703	8,060,000	76	24.14	194,550	2,578,000	24	24.88	64,158
Maple	9,385,000	18.50	173,605	6,795,000	72	18.16	123,380	2,590,000	28	19.39	50,225
Birch	8,691,000	19.56	169,990	6,901,000	80	19.73	136,168	1,790,000	20	18.89	33,822
Quartered Oak	2,420,000	68.28	165,230	....	....	......	....	2,420,000	100	68.28	165,230
Beech	1,885,000	17.39	32,788	310,000	16	17.90	5,550	1,575,000	84	17.29	27,238
Basswood	1,100,000	25.23	27,750	1,100,000	100	25.23	27,750	....	....	......	....
Ash	750,000	29.67	22,250	625,000	83	29.80	18,625	125,000	17	29.00	3,625
Mahogany	110,000	107.95	11,875	....	....	......	....	110,000	100	107.95	11,875
Gum	410,000	22.39	9,180	....	....	......	....	410,000	100	22.39	9,180
Total ...	48,951,000	$28.43	$1,391.801	27,616,000	56	$23.94	$660,933	21,335,000	44	$34.26	$730,868

manufacturers, 8,060,000 feet having come from within and 2,578,000 feet from outside the state at an average cost of $24.14 and $24.88 a thousand feet respectively. Maple to the amount of 9,385,000 feet and birch to the amount of 8,691,000 feet, the first mentioned costing an average of $18.50 and the latter $19.56 a thousand feet, also were reported. All of the quartered oak shown in the table originated outside of the state, while all of the basswood was grown in the state. The 310,000 feet of beech used which was grown in the state cost an average of $17.90 a thousand feet, while the 1,575,000 feet grown outside the state and which came principally from Michigan cost an average of $17.29 a thousand feet. The average price for all the woods used and which were grown in the state was $23.94 and $34.26 for the woods grown in other states. The high average for the woods grown in other states is due to the prices paid for quartered oak and mahogany.

CHURCH AND SCHOOL FURNISHINGS.

As in the chair industry, oak is the principal species used in the manufacture of church and school furnishings. The title used to indicate the industry detailed in Table IX is comprehensive of the numerous lines of eleven concerns whose products go to equip places of public and private gatherings. A total of 4,365,000 feet were reported used, the aggregate cost of which was $145,737 and the average price a thousand feet $33.39. Plain oak to the amount of 1,101,000 feet was bought, of which 865,000 feet came from outside the state. The average price paid a thousand feet for the latter was $46.25, while for the oak originating in the state and amounting to 236,000 feet, $39.87 a thousand feet was paid. All of the quartered oak—150,000 feet—came from outside the state, and which may be taken as further emphasis of the poor character of the remaining oak timber in Wisconsin. Only three species—gum, chestnut, and mahogany—of the thirteen woods utilized could not be supplied by the native forests. However, a large proportion of the plain oak, nearly all of the maple, more than one-half of the elm, and all of the quarter sawed oak came from other states. For the maple grown outside of Wisconsin an average price of $27.21 a thousand feet was paid, as compared with $30.47 paid for Wisconsin stock; and for elm $32.00 as compared with $20.11. The average price for the 2,616,000 feet bought outside the state was $37.73, and for the 1,749,000 feet grown in the state $26.89.

TABLE IX.—*Church and Schoool Furnishings.*

SPECIES.	Quantity used annually (Feet B. M.)	Average cost at factory per M. B. M.	Total cost at factory (f. o. b.).	GROWN IN WISCONSIN.				GROWN OUTSIDE WISCONSIN			
				Feet.	Per cent.	Average cost at factory per M.	Total cost at factory (f. o. b.).	Feet.	Per cent.	Average cost at factory per M.	Total cost at factory (f. o. b.).
Oak	1,101,000	$44.88	$49,415	236,000	21	$39.87	$9,410	865,000	79	$46.25	$40,005
Maple	1,013,000	27.38	27,735	53,090	5	30.47	1,615	960,000	95	27.21	26,120
Elm	909,000	26.64	24,224	409,000	45	20.11	8,224	500,000	55	32.00	16,000
Quartered Oak....	150,000	83.03	12,455	....	...	......	....	150,000	100	83.03	12,455
Birch	415,000	27.58	11,446	365,000	88	27.66	10,096	50,000	12	27.00	1,350
Basswood	335,000	25.90	8,706	335,000	100	25.99	8,706	....	...	......	....
Ash	223,000	18.03	4,020	223,000	100	18.03	4,020	....	...	......	....
White Pine	48,000	51.88	2,490	48,000	100	51.88	2,490	....	...	......	....
Butternut	50,000	32.60	1,630	50,000	100	32.60	1,630	....	...	......	....
Gum	64,000	24.00	1,536	....	...	......	....	64,000	100	24.00	1,533
Beech	30,000	28.00	840	30,000	100	28.00	840	....	...	......	....
Chestnut	25,000	32.00	800	....	...	......	....	25,000	100	32.00	800
Mahogany	2,000	220.00	440	....	...	......	....	2,000	100	220.00	440
Total	4,365,000	$33.39	$145,737	1,749,000	40	$26.89	$47,031	2,616,000	60	$37.73	$98,706

CIGAR BOXES.

The propensity of the American male to smoke tobacco in leaf form is well illustrated in Table X which gives in detail the figures covering the consumption of lumber in cigar box making. Altogether 5,204,000 feet were used in this industry, of which 3,953,000 feet, or 76 per cent, were sawed in Wisconsin and 1,251,000 feet, or 24 per cent, outside of the state. The total cost of all the lumber used was $184,816, divided between $120,660 for the Wisconsin product and $64,156 for the product of other states. A difference of $20.76 is shown in the average prices a thousand feet for the woods grown in and out of the state, which is due to the much higher cost of the species not native to Wisconsin. Basswood led the other species in quantity consumed with a total of 2,518,000 feet, or nearly 50 per cent of all the lumber utilized. All of the basswood and nearly all of the soft elm, which is second in the quantity utilized, was grown in the state. The four other species suitable for cigar boxes are grown in warmer climates. The adaptability of basswood and elm is shown in the fact that both woods are made up in imitation of the more expensive Spanish cedar boxes. Practically all of the tupelo gum, poplar, Spanish cedar, and red gum bought by the manufacturers was in the form of veneers of 1/16 inch or more in thickness.

TABLE X.—*Cigar Boxes.*

SPECIES.	Quantity used annually. (Feet B. M.)	Average cost at factory per M. B. M.	Total cost at factory (f. o. b.).	GROWN IN WISCONSIN.				GROWN OUTSIDE WISCONSIN.			
				Feet.	Per cent.	Average cost at factory per M.	Total cost at factory (f. o. b.).	Feet.	Per cent.	Average cost at factory per M.	Total cost at factory (f. o. b.).
Basswood	2,518,000	$36.10	$90,910	2,518,000	100	$36.10	$90,910	....	....	......	....
Soft Elm	1,510,000	21.39	32,300	1,435,000	95	20.73	29,750	75,000	5	$34.00	$2,550
Tupelo Gum	855,000	23.48	20,075	....	....	......	....	855,000	100	23.48	20,075
Poplar	157,000	124.00	19,469	....	....	......	....	157,000	100	124.00	19,469
Spanish Cedar ..	105,000	171.33	17,990	....	....	......	....	105,000	100	171.33	17,990
Gum	59,000	69.02	4,072	....	....	......	....	59,000	100	69.02	4,072
Total	5,204,000	$35.51	$184,816	3,953,000	76	$30.52	$120,660	1,251,000	24	$51.28	$64,156

COFFINS AND CASKETS.

Five species were reported used by manufacturers of coffins, caskets, and burial cases. In all 4,457,000 feet were utilized, costing in the aggregate $108,844, or an average price of $24.42 a thousand feet. As shown in Table XI the wood of which the largest quantity was used is chestnut of sound wormy grade. Chestnut is considered most desirable by the manufacturers in this line because of the durability of the wood in contact with the soil, and the further fact that the pin holes of the lower grade are covered by cloth in the utilization. Of this species, 1,916,000 feet were used, costing a total of $42,068 or an average price of $21.96 a thousand feet. White pine to the amount of 1,729,000 feet, of which 1,107,000 was grown in Wisconsin and 622,000 feet outside the state, also was used. The average price paid a thousand feet for the native white pine was $22.64 in comparison with $21.91 for that cut in other states. All of the basswood, aggregating 522,000 feet, and all of the oak, 245,000 feet, originated in Wisconsin. Within recent years experiments have been carried on in the substitution of western pine, the white pine of Idaho mainly, in place of the white pine of the north. The table indicates the use of 45,000 feet for which an average price of $22.22 a thousand feet was paid, or a slightly lower price than was paid for Wisconsin stock.

TABLE XI.—*Coffins and Caskets.*

SPECIES.	Quantity used annually. (Feet B. M.)	Average cost at factory per M. B. M.	Total cost at factory (f. o. b.).	GROWN IN WISCONSIN.				GROWN OUTSIDE WISCONSIN.			
				Feet.	Per cent.	Average cost at factory per M.	Total cost at factory (f. o. b.).	Feet.	Per cent.	Average cost at factory per M.	Total cost at factory (f. o. b.).
Chestnut	1,916,000	$21.96	$42,068	....	....	......	....	1,916,000	100	$21.96	$42,068
White Pine	1,729,000	22.37	38,686	1,107,000	64	$22.64	$25,058	622,000	36	21.91	13,628
Basswood	522,000	31.88	16,640	522,000	100	31.88	16,640	....	....	......	....
Oak	245,000	42.65	10,450	245,000	100	42.65	10,450	....	....	......	....
Western Pine	45,000	22.22	1,000	....	....	......	....	45,000	100	22.22	1,000
Total	4,457,000	$24.42	$108,844	1,874,000	42	$27.83	$52,148	2,583,000	58	$21.95	$56,696

EXCELSIOR.

The manufacture of excelsior for packing purposes is principally a side line of a more important manufacture. Table XII shows, however, a total of 8,350,000 feet of raw material purchased at an outlay of $82,550. Only two woods are used for excelsior—poplar and basswood—and the manufacturers secured the entire quantity reported in Wisconsin. For the 4,750,000 feet of poplar used an average price of $11.37 a thousand feet was paid, and $7.93 a thousand feet for the 3,600,000 feet of basswood. The average price paid for all the wood—$9.89—is the lowest for any of the industries and due to the fact that the raw material is not first manufactured but is bought in logs or bolts.

TABLE XII.—*Excelsior.*

SPECIES.	Quantity used annually. (Feet B. M.)	Average cost at factory per M. B. M.	Total cost at factory (f. o. b.).	GROWN IN WISCONSIN. Feet.	Per cent.	Average cost at factory per M.	Total cost at factory (f. o. b.).
Poplar	4,750,000	$11 37	$54,000	4,750,000	100	$11 37	$54,000
Basswood	3,600,000	7 93	28,550	3,600,000	100	7 93	28,550
	8,350,000	$9 89	$82,550	8,350,000	100	$9 89	$82,550

FURNITURE.

The manufacturers of furniture report the use of sixteen species, all of them with the exception of mahogany being produced in the United States. The lines of furniture made in the numerous factories throughout the state include most every article for the dining room, bed room, library, and kitchen, and range from the cheapest kitchen table to the most expensive drawing room piece. In Table XIII it is shown that 48,376,000 feet was the total quantity of wood used, of which 55 per cent was grown in and 45 per cent outside of Wisconsin. The average price a thousand feet paid for the latter stock was $27.17, while for native lumber $23.63 a thousand feet was paid. The average price for all the lumber reported was $25.22. Maple leads in the quantity used, a total of 17,167,000 feet being reported. But 5,121,000 feet of maple came from Wisconsin in comparison with 12,046,000 feet bought in other states. The average price paid a thousand feet for native maple was $24.33 and $24.04 for maple grown in other states. For the 298,000 feet of quartered oak bought in Wisconsin an average price of $48.62 a thousand feet was paid, though for southern lumber the average price for 1,144,000 feet was $64.55 a thousand. The lowest price wood reported entering into the manufacture of furniture was hemlock at $12.39 a thousand feet; the highest price wood was mahogany bought at $122.93 a thousand feet. Most all of the stock bought by the furniture manufacturers was in the rough, and ranged in grade from log run to firsts and seconds, varying according to the character of manufacturers. The tabulation for the industry was based upon reports made by fifty-eight concerns.

TABLE XIII.—*Furniture.*

SPECIES.	Quantity used annually. (Feet B. M.)	Average cost at factory per M. B. M.	Total cost at factory (f. o. b.).	GROWN IN WISCONSIN.				GROWN OUTSIDE WISCONSIN.			
				Feet.	Per cent.	Average cost at factory per M.	Total cost at factory (f. o. b.).	Feet.	Per cent.	Average cost at factory per M.	Total cost at factory (f. o. b.).
Maple	17,167,000	$24.13	$414,212	5,121,000	30	$24.33	$124,576	12,046,000	70	$24.04	$289,636
Oak (Plain)..	6,716,000	34.44	231,164	2,934,000	44	37.25	109,303	3,782,000	56	32.22	121,861
Birch	10,468,000	20.73	216,996	10,068,000	96	20.72	208,596	400,000	4	21.00	8,400
Oak (Q'td)...	1,442,000	61.26	88,342	298,000	21	48.63	14,490	1,144,000	79	64.55	73,852
Elm	2,479,000	25.75	63,846	2,099,000	85	25.31	53,121	380,000	15	28.22	10,725
Basswood ...	2,659,000	22.52	59,876	2,459,000	92	22.36	54,976	200,000	8	24.50	4,900
Hemlock	3,485,000	12.39	43,206	1,360,000	39	12.88	17,518	2,125,000	61	12.09	25,688
Ash	1,228,000	26.70	32,795	1,028,000	84	27.14	27,895	200,000	16	24.50	4,900
Mahogany ...	162,000	122.93	19,915	....	....	......	....	162,000	100	122.93	19,915
White Pine..	1,210,000	15.08	18,250	1,210,000	100	15.08	18,250	....	....	......	....
Gum	595,000	23.47	13,965	....	....	......	....	595,000	100	23.47	13,965
Beech	460,000	17.27	7,945	125,000	27	18.00	2,250	335,000	73	17.00	5,695
Chestnut	195,000	24.08	4,695	....	....	......	....	195,000	100	24.08	4,695
Cottonwood .	75,000	34.84	2,613	....	....	......	....	75,000	100	34.84	2,613
Walnut	30,000	63.33	1,900	....	....	......	....	30,000	100	63.33	1,900
Poplar	5,000	38.00	190	....	....	......	....	5,000	100	38.00	190
Total ..	48,376,000	$25.22	$1,219,910	26,702,000	55	$23.63	$630,975	21,674,000	45	$27.17	$588,935

HANDLES.

Table XIV details the quantities of the two species used in the manufacture of handles in Wisconsin. The handles turned out are those used in logging tools as well as for smaller hand tools and machines. A total of 1,650,000 feet, costing an average of $18.48 a thousand feet, were used. The 600,000 feet of maple grown in the state and which went into handles cost an average of $15.17 a thousand feet, while the 800,000 grown outside the state cost an average of $18.00 a thousand feet. But 250,000 feet of oak were used, all of which was cut in other states and for which was paid an average of $28.00 a thousand feet.

TABLE XIV.—*Handles.*

SPECIES.	Quantity used annually. (Feet B. M.)	Average cost at factory per M. B. M.	Total cost at factory (f. o. b.).	GROWN IN WISCONSIN.				GROWN OUTSIDE WISCONSIN.			
				Feet.	Per cent.	Average cost at factory per M.	Total cost at factory (f. o. b.).	Feet.	Per cent.	Average cost at factory per M.	Total cost at factory (f. o. b.).
Maple................	1,400,000	$16 79	$23,500	600,000	43	$15 17	$9,100	800,000	57	$18 00	$14,400
Oak..................	250,000	28 00	7,000	....	....	......	......	250,000	100	28 00	7,000
	1,650,000	$18 48	$30,500	600,000	36	$15 17	$9,100	1,050,000	64	$20 38	$21,400

MUSICAL INSTRUMENTS.

In the manufacture of musical instruments, under which designation is grouped small string and reed instruments as well as larger instruments such as pianos and piano parts and organs, fourteen species were reported used. In several instances it was found that only piano actions were made in Wisconsin, the finished cases being bought in another state. Table XV shows a total of 1,534,000 feet used, of which but 269,000 feet, or 18 per cent, were cut in the state, the remaining 1,265,000 feet, or 82 per cent, coming from other states. Chestnut was the wood chiefly employed, 610,000 feet, for which an average price of $38.62 a thousand feet was paid, being reported. Other than the

313,000 feet of elm, 191,000 feet of spruce, and 136,000 feet of maple reported, relatively small quantities of the additional species given in the table were used. The average price a thousand feet for all the lumber purchased was $41.76. The average price for all the woods bought in the state was $39.77 a thousand feet and $42.19 a thousand feet for the woods coming from other states. The highest average price paid for any wood was $77.20 a thousand feet for quartered oak. The 10,000 feet of mahogany reported cost but $60.00 a thousand feet.

TABLE XV.—*Musical Instruments.*

SPECIES.	Quantity used annually. (Feet B. M.)	Average cost at factory per M. B. M.	Total cost at factory (f. o. b.).	GROWN IN WISCONSIN.				GROWN OUTSIDE WISCONSIN.			
				Feet.	Per cent.	Average cost at factory per M.	Total cost at factory (f. o. b.).	Feet.	Per cent.	Average cost at factory per M.	Total cost at factory (f. o. b.).
Chestnut	610,000	$38.62	$23,560	....	....	......	....	610,000	100	$38.62	$23,560
Elm	313,000	39.24	12,283	158,000	44	$36.65	$5,058	175,000	56	41.29	7,225
Spruce	191,000	50.14	9,576	....	....	......	....	191,000	100	50.14	9,576
Maple	136,000	41.82	5,688	16,000	12	40.50	648	120,000	88	42.00	5,040
Poplar	67,000	44.40	2,975	....	....	......	....	67,000	100	44.40	2,975
Oak	49,000	51.92	2,544	34,000	69	51.88	1,764	15,000	31	52.00	780
White Pine	32,000	55.16	1,765	17,000	53	42.05	715	15,000	47	70.00	1,050
Gum	50,000	33.00	1,650	....	....	......	....	50,000	100	33.00	1,650
Birch	37,000	38.54	1,426	37,000	100	38.54	1,426	....	....	......	....
Basswood	25,000	40.00	1,000	25,000	100	40.00	1,000	....	....	......	....
Oak (Q'td)	10,000	77.20	792	....	....	......	....	10,000	100	77.20	792
Walnut	10,000	60.00	600	....	....	......	....	10,000	100	60.00	600
Mahogany	2,000	60.00	120	....	....	......	....	2,000	100	60.00	120
Ash	2,000	44.00	88	2,000	100	44.00	88	....	....	......	....
Total	1,534,000	$41.76	$64,067	269,000	18	$39.77	$10,699	1,265,000	82	$42.19	$53,368

REFRIGERATORS.

Figures are given in detail in Table XVI of the woods entering into the manufacture of refrigerators. This industry utilized a total of 11,095,000 feet of lumber costing in all $240,340. Eleven species were reported and of the eight indigenous to Wisconsin the entire quantity of each wood used was secured within the state. Ash and elm are the leading woods employed in making refrigerators, and both are desirable over other species because of the absence of any odor which could be absorbed by food products. Several of the manufacturers are now substituting metal largely in place of wood. A total of 4,300,000 feet of ash were used for which an average price of $24.30 a thousand feet was paid. In elm the amount used was 3,200,000 feet costing an average of $21.94 a thousand feet. Hemlock, birch, oak, white pine, basswood, and maple were used in smaller quantities. Of the woods grown outside the state were used 300,000 feet of yellow pine, 40,000 feet of cypress, and 20,000 feet of sycamore.

TABLE XVI.—*Refrigerators.*

Species.	Quantity used annually. (Feet B.M.)	Average cost at factory per M. B. M.	Total cost at factory (f. o. b.).	Grown in Wisconsin.				Grown Outside Wisconsin.			
				Feet.	Per cent.	Average cost at factory per M.	Total cost at factory (f. o. b.).	Feet.	Per cent.	Average cost at factory per M.	Total cost at factory (f. o. b.).
Ash	4,300,000	$24.30	$104,500	4,300,000	100	$24.30	$104,500	....	...	......	....
Elm	3,200,000	21.94	70,200	3,200,000	100	21.94	70,200	....	...	......	....
Hemlock	1,250,000	14.20	17,750	1,250,000	100	14.20	17,750	....	...	......	....
Birch	910,000	17.73	16,130	910,000	100	17.73	16,130	....	...	......	....
Oak	285,000	30.00	8,550	285,000	100	30.00	8,550	....	...	......	....
White Pine	290,000	24.28	7,040	290,000	100	24.28	7,040	....	...	......	....
Basswood	250,000	23.00	5,750	250,000	100	23.00	5,750	....	...	......	....
Maple	250,000	18.00	4,500	250,000	100	18.00	4,500	....	...	......	....
Yellow Pine	300,000	15.00	4,500	....	...	......	....	300,000	100	$15.00	$4,500
Cypress	40,000	24.00	960	....	...	......	....	40,000	100	24.00	960
Sycamore	20,000	23.00	460	....	...	......	....	20,000	100	23.00	460
Total	11,095,000	$21.66	$240,340	10,735,000	97	$21.84	$234,420	360,000	3	$16.44	$5,920

PULP.

Table XVII has been divided into two parts to better distinguish between the ground wood pulp and the sulphite fibre product of the Wisconsin mills. In point of the volume of raw material used, as well in the aggregate cost of the material, the industry stands first among those of the Badger State. To the pulp manufacturers the reforestation problem is of vital importance because of the dwindling supplies of suitable pulp timber in the United States. The manufacturers also are deeply interested in the protection of the watersheds of Wisconsin because of the utilization of so much of the available water power by the mills. Three species were reported entering into the production of ground wood pulp—spruce, pine, and poplar. While all of the pine was reported as white pine, a small per cent of the total was Jack pine with which experiments have been carried on for some time. Spruce is the chief species used for ground wood pulp, 96,204,000 feet having been reported used and of which amount 27,066,000 feet, or 28 per cent, was secured in the state and 69,138,000 feet, or 72 per cent, bought outside the state. The difference in the average price a thousand feet of the material bought in and out of the state was but four cents—$20.21 and $20.17 respectively. For the 1,610,000 feet of pine cut in the state an average price of $10.06 a thousand feet was paid, while for the 1,418,000 feet coming from other sources $9.52 a thousand feet was paid. The average price a thousand feet paid for the $2,264,000 feet of poplar originating in the state was $10.11, as compared with $9.24 a thousand feet paid for the 206,000 feet bought outside.

In the production of sulphite fibre the Wisconsin mills reported the use of three species—hemlock, spruce, and balsam, amounting in all to 208,591,000 feet and aggregating $2,822,987 in cost. The quantity given above is more than double of that which entered into ground wood pulp. The average cost a thousand feet of the hemlock, spruce, and balsam was $13.53, in contrast with the average cost of $19.63 for the species used in grinding. Hemlock amounting to 116,570,000 feet was used, of which amount 75,268,000, or 65 per cent, was grown in the state and 41,302,000 feet, or 35 per cent, came from other states.

The average price a thousand feet paid for Wisconsin hemlock was $12.02 and but $11.93 for the wood secured elsewhere. For spruce an average price of $17.41 a thousand feet was paid for the 18,746,000 feet reported originating in Wisconsin, and $17.02 a thousand feet for the 48,685,000 feet of spruce coming from other states. The average price for the 12,854,000 feet of balsam secured in Wisconsin was $11.00 a thousand feet, while $10.98 a thousand feet was the average price for the 11,736,000 feet bought outside.

In both the ground wood pulp and sulphite fibre a total of 163,635,000 feet of spruce were used. Of this volume Wisconsin furnished but 28 per cent. The total amount reported for all species was 310,293,000 feet, aggregating in value $4,819,081. The average price a thousand feet paid for all the species was $15.54. Of the total number of feet consumed Wisconsin contributed 44 per cent, and from other states was drawn 56 per cent.

The manufacturers of pulp reported their consumption in cords. The factor used in reducing the cords to feet was two cords to 1,000 feet board measure.

TABLE XVII.—*Pulp.*

SPECIES.	Quantity used annually. (Feet B. M.)	Average cost at factory per M. B. M.	Total cost at factory. (f.o.b.).	GROWN IN WISCONSIN.				GROWN OUTSIDE WISCONSIN.			
				Feet.	Per cent.	Average cost at factory per M.	Total cost at factory (f. o. b.).	Feet.	Per cent.	Average cost at factory per M.	Total cost at factory (fo.b.).
				GROUND WOOD.							
Spruce......	96,204,000	$20 18	$1,941,612	27,066,000	28	$20 21	$546,945	69,138,000	72	$20 17	$1,394,667
Pine........	3,028,000	9 80	29,688	1,610,000	53	10 06	16,191	1,418,000	47	9 52	13,497
Poplar......	2,470,000	10 04	24,794	2,264,000	92	10 11	22,891	206,000	8	9 24	1,906
	101,702,000	$19 63	$1,996,094	30,940,000	30	$18 94	$586 027	70,762,000	70	$19 93	$1,410,067
				SULPHITE FIBRE.							
Hemlock...	116,570,000	$11 99	$1,397,542	75,268,000	65	$12 02	$904,874	41,302,000	35	$11 93	$492,668
Spruce.....	67,431,000	17 13	1,155,116	18,746,000	28	17 41	326,282	48,685,000	72	17 02	828,834
Balsam....	24,590,000	10 99	270,329	12,854,000	52	11 00	141,450	11,736,000	48	10 98	128,879
	208,591,000	$13 53	$2,822,987	106,868,000	51	$12 84	$1,372,606	101,723,000	49	$14 26	$1,450,381
Grand Total ..	310,293,000	$15 54	$4,819,081	137,808,000	44	$14 21	$1,958,633	172,485,000	56	$16 58	$2,860,448

SASH, DOORS, BLINDS, AND INTERIOR AND EXTERIOR FINISH.

The second largest industry in Wisconsin in the matter of consumption of raw material is the manufacture of sash, doors, blinds and interior and exterior finish. Although the pulp mills utilized over 100,000,000 feet more timber than the sash, door, and millwork factories, the total cost of the lumber used by the latter exceeded that of the pulp industry by nearly $500,000. Table XVIII shows the use of twenty-five woods in the industry—a greater variety of species than employed in any other single line of manufacture. The average value a thousand feet ranged from $12.92 for tamarack, the lowest price reported, to $153.57 for mahogany, the highest price given. The average value for all the species combined was $30.19 a thousand feet. The total quantity of feet reported used was 174,185,000 feet bought at a cost of $5,259,353. Wisconsin furnished 48,947,000 feet of the total, the value of which was $1,243,921. From other states was secured 125,238,000 feet valued at $4,015,432. The proportion of lumber contributed by Wisconsin was 28 per cent, as against 72 per cent coming from outside the state.

Western pine, which includes Idaho white pine, western yellow pine, and California sugar pine, formed the bulk of the material used, or 43 per cent. The western pine utilized amounted to 75,175,000 feet for which was paid an average price of $31.38 a thousand feet, or a total of $2,359,155. Northern white pine is the next species used in point of importance, a total of 22,814,000 feet, costing $665,425, having been manufactured. Of the white pine used, Wisconsin provided 16,858,000 feet, or 74 per cent, and from outside the state was drawn 5,956,000 feet, or 26 per cent. The average cost a thousand feet of the native white pine was $28.46, while $31.16 was paid for that grown elsewhere. In oak the Wisconsin timber used formed 32 per cent, in birch 87 per cent, in basswood 81 per cent, in hemlock 53 per cent, in maple 57 per cent, in ash 99 per cent, in Norway pine 82 per cent, in elm 100 per cent, in spruce 74 per cent, in tamarack 100 per cent, and in butternut 100 per cent.

TABLE XVIII.—*Sash, Doors, Blinds, and Interior and Exterior Finish.*

SPECIES.	Quantity used annually. (Feet B. M.).	Average cost at factory per M. B. M.	Total cost at factory (f. o. b.).	GROWN IN WISCONSIN.				GROWN OUTSIDE WISCONSIN.			
				Feet.	Per cent.	Average cost at factory per M.	Total cost at factory (f. o. b.).	Feet.	Per cent.	Average cost at factory per M.	Total cost at factory (f. o. b.).
Pine, Western	75,175,000	$31.38	$2,359,155	....	....	......	....	75,175,000	100	$31.38	$2,359,155
Pine, White	22,814,000	29.17	665,425	16,858,000	74	$28.46	$479,855	5,956,000	26	31.16	185,570
Oak	14,392,000	41.78	601,369	4,642,000	32	37.33	173,264	9,750,000	68	43.91	428,105
Pine, Yellow	12,460,000	31.21	388,865	....	....	......	....	12,460,000	100	31.21	388,865
Birch	13,471,000	23.07	310,720	11,676,000	87	22.95	268,000	1,795,000	13	23.80	42,720
Cypress	7,848,000	35.35	277,395	....	....	......	....	7,848,000	100	35.35	277,395
Basswood	4,940,000	22.12	109,250	4,015,000	81	22.00	88,325	925,000	19	22.62	20,925
Hemlock	6,865,000	15.36	105,420	3,615,000	53	15.16	54,805	3,250,000	47	15.58	50,625
Spruce, Western	3,212,000	30.66	98,469	....	....	......	....	3,212,000	100	30.66	98,469
Maple	4,148,000	21.09	87,495	2,383,000	57	19.57	46,635	1,765,000	43	23.15	40,860
Fir, Douglas	2,125,000	36.59	77,762	....	....	......	....	2,125,000	100	36.50	77,762
Ash	2,321,000	22.41	52,023	2,308,000	99	22.33	51,525	13,000	1	38.02	498
Norway Pine	1,750,000	25.21	44,125	1,435,000	82	24.43	35,050	315,000	18	28.81	9,075
Oak (Q'td)	373,000	74.70	27,863	190,000	51	78.82	14,975	183,000	49	70.43	12,888
Elm	1,560,000	15.99	24,950	1,560,000	100	15.99	24,950	....	....	......	....
Mahogany	56,000	153.57	8,600	....	....	......	....	56,000	100	153.57	8,600
Spruce	250,000	30.41	7,602	185,000	74	27.36	5,062	65,000	26	39.07	2,540
Poplar	132,000	42.82	5,652	....	....	......	....	132,000	100	42.82	5,652
Gum	160,000	21.38	3,420	....	....	......	....	160,000	100	21.38	3,420
Redwood	25,000	45.00	1,125	....	....	......	....	25,000	100	45.00	1,125
Chestnut	22,000	41.95	923	....	....	......	....	22,000	100	41.95	923
Tamarack	60,000	12.92	775	60,000	100	12.92	775	....	....	......	....
Butternut	20,000	35.00	700	20,000	100	35.00	700	....	....	......	....
Cottonwood	5,000	32.00	160	....	....	......	....	5,000	100	32.00	160
Red Cedar	1,000	100.00	100	....	....	......	....	1,000	100	100.00	100
Total	174,185,000	$30.19	$5,259,353	48,947,000	28	$25.41	$1,243,921	125,238,000	72	$32.06	$4,015,432

TOYS, WAGONS, AND LAWN FURNITURE.

The manufacture of lawn furniture in connection with toys and wagons for children makes up an industry peculiar in itself. By toys and wagons is meant the many small playthings as well as boys' wagons, sleds, coasters, and the like. In recent years metal has become more generally used in the making of toys, and Wisconsin manufacturers have followed the innovation to some extent. Six concerns furnished the figures which go to make up Table XIX. The total amount of lumber therein shown to have been used is 5,475,000 feet, costing an average of $24.84 a thousand feet or an aggregate of $135,572. The amount of this volume of lumber grown in Wisconsin amounted to 3,295,000 feet, and that grown outside the state to 2,162,000 feet. The average price paid for the native timber was $24.48 a thousand feet and $25.39 for that grown in other states. The 1,376,000 feet of elm, 1,346,000 feet of basswood, and 1,228,000 feet of maple comprises 72 per cent of the total amount of lumber reported for the industry. Of the elm used, 53 per cent was grown in Wisconsin, as was 87 per cent of the basswood and 62 per cent of the maple.

TABLE XIX.—*Toys, Wagons, and Lawn Furniture.*

SPECIES.	Quantity used annually. (Feet B. M.)	Average cost at factory per M. B. M.	Total cost at factory (f. o. b.).	GROWN IN WISCONSIN.				GROWN OUTSIDE WISCONSIN.			
				Feet.	Per cent.	Average cost at factory per M.	Total cost at factory (f. o. b.).	Feet.	Per cent.	Average cost at factory per M.	Total cost at factory (f. o. b.).
Elm	1,376,000	$27.17	$37,392	731,000	53	$27.05	$19,772	645,000	47	$27.81	$17,620
Basswood	1,346,000	25.81	34,746	1,178,000	87	25.89	30,373	178,000	13	25.28	4,373
Maple	1,228,000	21.68	26,617	764,000	62	19.72	15,067	464,000	38	24.89	11,550
Birch	807,000	21.85	17,629	421,000	52	21.81	9,182	386,000	48	21.88	8,447
Ash	320,000	32.75	10,480	180,000	56	22.89	5,920	140,000	44	32.57	4,560
Gum	243,000	23.00	5,589	....	....	......	......	243,000	100	23.00	5,589
Poplar	41,000	31.22	1,280	....	....	......	......	41,000	100	31.22	1,280
Cottonwood	45,000	25.00	1,125	....	....	......	......	45,000	100	25.00	1,125
Hemlock	51,000	14.00	714	26,000	51	14.00	364	25,000	49	14.00	350
Total	5,457,000	$24.84	$135,572	3,295,000	61	$24.48	$80,678	2,162,000	39	$25.39	$54,894

TRUNKS.

Basswood is the principal wood employed by the manufacturers of trunks in Wisconsin, the quantity of this one species used being 70 per cent of the entire amount of lumber reported. Table XX shows five species going into trunks, though but three of these were utilized in sufficient volume to make them of importance. Altogether 11,575,000 feet were reported, costing an average of $23.11 a thousand feet and totaling $267,455 in value. From Wisconsin was drawn 10,595,000 feet, with an average value of $23.15 a thousand feet, and from other states 980,000 feet, with an average value of $22.62 a thousand feet. Of the basswood used, 7,665,000 feet originated in the state and cost an average of $23.29 a thousand feet, and 460,000 feet were bought outside the state at an average price of $22.53 a thousand feet.

TABLE XX.—*Trunks.*

SPECIES.	Quantity used annually. (Feet B. M.)	Average cost at factory per M. B. M.	Total cost at factory (f. o. b.).	GROWN IN WISCONSIN.				GROWN OUTSIDE WISCONSIN.			
				Feet.	Per cent.	Average cost at factory per M.	Total cost at factory (f. o. b.).	Feet.	Per cent.	Average cost at factory per M.	Total cost at factory (f. o. b.).
Basswood	8,125,000	$23.25	$188,912	7,665,000	94	$23.29	$178,550	460,000	6	$22.53	$10,363
White Pine	2,180,000	21.94	47,827	2,055,000	94	22.10	45,421	125,000	6	19.25	2,406
Elm	1,140,000	24.23	27,618	775,000	68	24.57	19,033	365,000	32	23.52	8,585
Ash	100,000	22.88	2,288	100,000	100	22.88	2,288	....	....	......	....
Cottonwood	30,000	27.00	810	....	....	......	....	30,000	100	27.00	810
Total	11,575,000	$23.11	$267,455	10,595,000	92	$23.15	$245,292	980,000	8	$22.62	$22,163

OFFICE, STORE, AND BANK FIXTURES, AND CABINET WORK.

A large variety of woods was reported entering into the manufacture of office, store and bank fixtures and cabinet work, twenty-three species being shown in Table XXI. Several imported woods including English oak costing $350.00 a thousand feet, Circassian walnut at $350 a thousand feet, French walnut at $200 a thousand feet, and rosewood at $500 a thousand feet, were employed. These expensive cabinet woods were, of course, used in the form of veneers. The cost of these foreign grown woods tended to largely increase the average price a thousand feet for the lumber grown outside the state. Altogether 6,005,000 feet are shown in the table as having been used. Of this quantity, 3,083,000 feet were bought in Wisconsin at an average price of $32.52 a thousand feet. The 2,922,000 feet grown in other

TABLE XXI.—*Office, Store, and Bank Fixtures. Cabinet Work.*

SPECIES.	Quantity used annually. (Feet B. M.)	Average cost at factory per M. B. M.	Total cost at factory (f. o. b.).	GROWN IN WISCONSIN.				GROWN OUTSIDE WISCONSIN.			
				Feet.	Per cent.	Average cost at factory per M.	Total cost at factory (f. o. b.).	Feet.	Per cent.	Average cost at factory per M.	Total cost at factory (f. o. b.).
Oak	1,413,000	$46.06	$35,081	538,000	38	$41.72	$22,445	875,000	62	$48.73	$42,638
Birch	1,346,000	45.34	40,774	1,251,000	93	30.31	37,924	95,000	7	30.00	2,850
Oak (Q'td.)	610,000	77.72	47,410	....	....	......	....	610,000	100	77.72	47,410
Mahogany	180,000	147.97	26,635	....	....	......	....	180,000	100	147.97	26,635
Basswood	769,000	30.25	23,260	669,000	87	30.73	20,560	100,000	13	27.00	2,700
White Pine	478,000	30.80	14,725	293,000	61	29.35	8,600	185,000	39	33.11	6,125
Yellow Pine	455,000	30.66	13,950	....	....	......	....	455,000	100	30.66	13,950
Ash	178,000	34.41	6,125	158,000	89	34.34	5,425	20,000	11	35.00	700
Maple	182,000	28.96	5,270	162,000	89	30.06	4,870	20,000	11	20.00	400
English Oak	10,000	350.00	3,500	....	....	......	....	10,000	100	350.00	3,500
Cherry	33,000	90.91	3,000	....	....	......	....	33,000	100	90.91	3,000
Douglas Fir	55,000	39.55	2,175	....	....	......	....	55,000	100	39.55	2,175
Chestnut	100,000	21.60	2,160	....	....	......	....	100,000	100	21.60	2,160
Walnut	22,000	95.91	2,110	....	....	......	....	22,000	100	95.91	2,110
Cypress	55,000	37.36	2,055	....	....	......	....	55,000	100	37.36	2,055
Circassian Waln't	5,000	350.00	1,750	....	....	......	....	5,000	100	350.00	1,750
Poplar	50,000	32.30	1,615	....	....	......	....	50,000	100	32.30	1,615
French Walnut	5,000	200.00	1,000	....	....	......	....	5,000	100	200.00	1,000
Western Spruce	25,000	30.00	750	....	....	......	....	25,000	100	30.00	750
Gum	21,000	33.24	698	....	....	......	....	21,000	100	33.24	698
Rosewood	1,000	500.00	500	....	....	......	....	1,000	100	500.00	500
Butternut	5,000	50.00	250	5,000	100	50.00	250	....	....	......	....
Elm	7,000	25.14	176	7,000	100	25.14	176	....	....	......	....
Total	6,005,000	$44.12	$264,969	3,083,000	51	$32.52	$100,248	2,922,000	49	$56.37	$164,721

states cost an average of $56.37 a thousand feet. Oak and birch were the two species most largely used, 1,413,000 feet of the former and 1,346,000 feet of the latter being utilized. Of the oak, 38 per cent originated in and 62 per cent outside of the state. The total amount of birch bought in other states amounted to but 95,000 feet. As evidenced in other industries, all of the quartered oak used, amounting to 610,000 feet, was sawed in southern states.

VEHICLES AND VEHICLE STOCK.

The manufacture of gears, wheels, poles, shafts and other parts for wagons and carriages in other states where abundant supplies of oak and hickory are to be had has resulted in reducing considerably the number of actual vehicle manufacturers in Wisconsin in recent years. In compiling the figures contained in Table XXII the reports of the concerns which merely assemble the manufactured parts bought elsewhere and so produce a finished vehicle were not included. The perfection of machinery for turning out finished wheels and other parts has so cheapened them that the small wagon and carriage builder has been unable to successfully compete in the trade. In the manufacture of vehicles and vehicle stock was reported used a total of 41,664,000 feet of an aggregate value of $1,709,203. But 23 per cent of all the lumber reported was grown in Wisconsin, the remaining 77 per cent being secured in other states. The average price paid a thousand feet for the former was $32.54, while $43.58 a thousand feet was paid for the latter stock. Of the 14,518,000 feet of oak used, 2,473,000 feet, or 17 per cent, was native stock, the balance of 12,045,000 feet, or 83 per cent, coming from outside of the state. For the Wisconsin oak an average price of $40.51 a thousand feet was paid, while for the southern stock the higher average price of $44.08 a thousand feet was paid. Of the elm used, 1,958,000 feet was obtained in and 3,207,000 feet outside of the state. The average price paid for the latter stock was $2.83 a thousand feet less than for Wisconsin elm. A lower average price also was paid for the 2,137,000 feet of maple bought outside of the state than for the 2,344,000 feet secured within the state, the difference being $2.53 a thousand feet.

No effort was made to ascertain the volume of wood used in the repair of vehicles, as a list of those engaged in that work would embrace practically every blacksmith in the state. Several former wagon and carriage builders are now manufacturing automobile bodies, and the growth of this latter business is expected to work further great changes within the next few years.

TABLE XXII.—*Vehicles and Vehicle Stock.*

SPECIES.	Quantity used annually. (Feet B. M.).	Average cost at factory per M. B. M.	Total cost at factory (f. o. b.).	GROWN IN WISCONSIN.				GROWN OUTSIDE WISCONSIN.			
				Feet.	Per cent.	Average cost at factory per M.	Total cost at factory (f. o. b.).	Feet.	Per cent.	Average cost at factory per M.	Total co
Oak	14,518,000	$43.48	$631,197	2,473,000	17	$40.51	$100,177	12,045,000	83	$44.08	$531,020
Hickory	5,039,000	61.31	308,945	....	...	......	....	5,039,000	100	61.31	308,945
Cottonwood	4,614,000	47.77	220,437	....	...	......	....	4,614,000	100	47.77	220,437
Elm	5,165,000	30.01	154,984	1,958,000	38	$31.76	$62,204	3,207,000	62	28.93	92,780
Maple	4,481,000	30.42	136,318	2,344,000	52	31.63	74,140	2,137,000	48	29.10	62,178
Poplar	1,395,000	50.07	69,845	....	...	......	....	1,395,000	100	50.07	69,845
Yellow Pine	2,337,000	26.77	62,567	....	...	......	....	2,337,000	100	26.77	62,567
Ash	1,020,000	47.66	48,615	474,000	46	43.42	20,580	546,000	54	51.35	28,035
Basswood	1,036,000	33.65	34,866	1,036,000	100	33.65	34,866	....	...	....	....
Birch	1,283,000	15.08	19,358	1,283,000	100	15.08	19,358	....	...	....	....
Gum	665,000	26.72	17,775	....	...	......	....	665,000	100	26.72	17,775
White Pine	91,000	32.48	2,956	91,000	100	32.48	2,956	....	...	....	....
Mahogany	10,000	95.00	950	....	...	......	....	10,000	100	95.00	950
Fir	5,000	45.00	225	....	...	......	....	5,000	100	45.00	225
Beech	2,000	45.00	90	2,000	100	45.00	90	....	...	....	....
Spruce	3,000	25.00	75	3,000	100	25.00	75	....	...	....	....
Total	41,664,000	$41.02	$1,709,203	9,664,000	23	$32.54	$314,446	32,000,000	77	$43.58	$1,394,757

WINDMILLS, TANKS, AND SILOS.

The use of metal as a substitute for wood in the construction of windmills and in the making of tanks has reduced to some extent the amount of lumber utilized by that industry in recent years. Table XXIII dealing with the species and quantities consumed in the manufacture for a year shows a total of 9,498,000 feet having a value of $342,366. The proportion of the lumber furnished by Wisconsin was but 32 per cent, as compared with 68 per cent coming from other states. Of the 4,110,000 feet of white pine reported, 2,120,000 feet bought at an average price of $35.16 a thousand feet was grown in the state and 1,990,000 feet costing an average of $35.35 a thousand feet was secured outside of the state. Douglas fir and cypress were the next two species employed in the order of consumption—2,390,000 feet, costing an average of $35.28 a thousand feet, and 800,000 feet, costing an average of $41.40 a thousand feet, being used respectively. For the 45,000 feet of oak reported bought in Wisconsin an average price of $66.22 a thousand feet was paid. Southern oak amounting to 240,000 feet was purchased at an average price of $53.00 a thousand feet. A difference of $2.65 occurs in the average price a thousand feet paid for the woods grown in and out of the state, the lower price having been paid for Wisconsin stock.

TABLE XXIII.—*Windmills, Tanks, and Silos.*

SPECIES.	Quantity used annually. (Feet B. M.)	Average cost at factory per M. B. M.	Total cost at factory (f. o. b.).	GROWN IN WISCONSIN.				GROWN OUTSIDE WISCONSIN.			
				Feet.	Per cent.	Average cost at factory per M.	Total cost at factory (f. o. b.).	Feet.	Per cent.	Average cost at factory per M.	Total cost at factory (f. o. b.).
White Pine	4,110,000	$35.25	$144,886	2,120,000	52	$35.16	$74,538	1,990,000	48	$35.35	$70,348
Douglas Fir	2,390,000	35.28	84,325	....	....	......	....	2,390,000	100	35.28	84,325
Cypress	800,000	41.40	33,123	....	....	......	....	800,000	100	41.40	33,123
Basswood	614,000	38.24	23,480	314,000	51	37.99	11,930	300,000	49	38.50	11,550
Oak	285,000	55.09	15,700	45,000	16	66.22	2,980	240,000	84	53.00	12,720
Yellow Pine	460,000	29.57	13,600	....	....	......	....	400,000	100	29.57	13,600
Norway Pine ...	305,000	28.44	8,675	280,000	92	28.48	7,975	25,000	8	28.00	700
Ash	124,000	55.03	6,824	....	....	......	....	124,000	100	55.03	6,824
Maple	115,000	38.50	4,428	50,000	43	40.00	2,000	65,000	57	37.35	2,428
Hemlock	150,000	20.00	3,000	150,000	100	20.00	3,000	....	....	......	....
Western Spruce .	50,000	42.00	2,100	....	....	......	....	50,000	100	42.00	2,100
Tamarack	75,000	19.67	1,475	75,000	100	19.67	1,475	....	....	......	....
Red Cedar	20,000	37.50	750	....	....	......	....	20,000	100	37.50	750
Total	9,498,000	$36.05	$342,366	3,034,000	32	$34.24	$103,898	6,464,000	68	$36.8	$238,468

WOODENWARE.

All of the woods indigenous to Wisconsin are used in the manufacture of woodenware. The products of the thirty-seven concerns whose individual reports went to make up Table XXIV cover a wide variety of packages and other articles classed as woodenware. Under this heading has been included the manufacturers of cheese boxes who are

TABLE XXIV.—*Woodenware.*

SPECIES.	Quantity used annually. (Feet B. M.)	Average cost at factory per M. B. M.	Total cost at factory (f. o. b.).	GROWN IN WISCONSIN.				GROWN OUTSIDE WISCONSIN.			
				Feet.	Per cent.	Average cost at factory per M.	Total cost at factory (f. o. b.)	Feet.	Per cent.	Average cost at factory per M.	Total cost at factory (f. o. b.).
Basswood	25,825,000	$14.54	$375,403	23,975,000	93	$14.11	$338,403	1,850,000	7	$20.00	$37,000
Birch	15,620,000	13.73	214,430	14,520,000	93	13.47	195,580	1,100,000	7	17.14	18,850
Elm	6,615,000	15.66	108,558	6,475,000	98	15.63	101,208	140,000	2	16.79	2,350
White Pine ..	6,925,000	14.25	98,650	6,925,000	100	14.25	98,650	....	....	....	....
Maple	2,962,000	11.30	33,463	2,932,000	100	11.30	33,463	....	....	....	....
Ash	1,281,000	10.11	12,950	500,000	39	10.24	5,118	781,000	61	10.03	7,832
Poplar	1,080,000	9.00	10,845	980,000	91	9.00	8,845	100,000	9	20.00	2,000
Cypress	300,000	27.00	8,100	....	....	......	....	300,000	100	27.00	8,100
Jack Pine	600,000	8.00	4,800	600.000	100	8.00	4,800	....	....	....	....
Tamarack	415,000	9.33	3,874	415,000	100	9.33	3,874	....	....	....	....
Gum	100,000	24.00	2,400	....	....	......	....	100,000	100	24.00	2,400
Willow	100,000	9.70	970	100,000	100	9.70	970	....	....	....	....
Cottonwood ..	75,000	12.00	900	....	....	......	....	75,000	100	12.00	900
Cedar	80,000	11.00	880	80,000	100	11.00	880	....	....	....	....
Hemlock	20,000	10.00	200	20,000	100	10.00	200	....	....	....	....
Butternut	25,000	6.00	150	25,000	100	6.00	150	....	....	....	....
Total ...	62,023,000	14.05	$871,573	57,577,000	93	$13.76	$792,141	4,446,000	7	$17.86	$79,432

numerous owing to the large dairy interests of the state and which create a demand for boxes for the packing of cheese and butter. The average price a thousand feet paid for all the lumber reported was low, amounting to but $14.05. This is accounted for mainly by the fact that the raw material was bought in the form of bolts and logs and much of it came from settlers. Of the total amount utilized—62,023,000 feet—93 per cent was grown in the state, and but 7 per cent bought outside. The basswood, birch, elm, and white pine used comprised 89 per cent of the total quantity for the entire industry. Small amounts of basswood, birch, and elm were purchased outside the state but all the white pine reported was grown in Wisconsin. The average price a thousand feet paid for all the lumber originating in the state was $13.76 a thousand feet, while $17.86 a thousand feet was paid for that grown elsewhere.

MISCELLANEOUS.

Under this caption appear the manufactures of twenty-six concerns whose figures on the raw material used are comprised in Table XXV. The miscellaneous table was made necessary by the fact that only one or perhaps two concerns manufactured the same product and the publication in separate tables of the figures furnished by them would reveal their individual business secrets. Altogether the twenty-six concerns utilized 34,404,000 feet of lumber bought at an average price of $25.87 a thousand feet and costing a total of $890,121. Wisconsin furnished 22,219,000 feet, or 65 per cent, of the total amount used, while 12,185,000 feet, or 35 per cent, came from other states. Of the twenty-two species shown to have been used, birch, basswood, hemlock, white pine, western pine, and maple were the six principal woods utilized. All of the birch, basswood and hemlock was reported as having grown in the state. The 4,242,000 feet of white pine listed cost an average of $41.03 a thousand feet, while but $31 a thousand feet was paid for the western pine. The highest average price paid was $81.43 for mahogany, and the lowest average price was

$10.75 for hemlock. The average cost of the woods grown in the state was $18.96 as compared with $38.47 for those grown outside the state.

TABLE XXV.—*Miscellaneous.*

SPECIES.	Quantity used annually. (Feet B. M.)	Average cost at factory per M. B. M.	Total cost at factory (f. o. b.).	GROWN IN WISCONSIN. Feet				GROWN OUTSIDE WISCONSIN. Feet.			
				Feet	Per cent.	Average cost at factory per M.	Total cost at factory (f. o. b.).	Feet.	Per cent.	Average cost at factory per M.	Total cost at factory (f. o. b.).
White Pine....	4,242,000	$41.03	$174,085	2,342,000	55	$39.72	$93,085	1,900,000	45	$42.63	$81,000
Western Pine..	4,000,000	31.00	124,000	....	....	......	....	4,000,000	100	31.00	124,000
Maple	3,555,000	29.55	105,037	2,005,000	56	28.61	57,354	1,550,000	44	30.76	47,683
Basswood	5,510,000	17.92	98,745	5,510,000	100	17.92	98,745	....	....	......	....
Poplar	1,410,000	65.64	92,550	....	....	......	....	1,410,000	100	65.64	92,550
Birch	6,027,000	14.97	90,219	6,027,000	100	14.97	90,219	....	....	......	....
Hemlock	4,550,000	10.75	48,900	4,550,000	100	10.75	48,900	....	....	......	....
Ash	1,141,000	39.56	45,136	438,000	38	9.04	3,956	703,000	62	58.58	41,180
Elm	1,637,000	18.99	31,094	937,000	57	16.13	15,119	700,000	43	22.82	15,975
Oak	401,000	40.30	16,160	175,000	44	40.29	7,050	226,000	56	40.31	9,110
Beech	800,000	20.00	16,000	....	....	......	....	800,000	100	20.00	16,000
Cypress	315,000	47.90	15,090	....	....	......	....	315,000	100	47.90	15,090
Cherry	120,000	59.67	7,160	....	....	......	....	120,000	100	59.67	7,160
Norway Pine..	225,000	30.00	6,750	225,000	100	30.00	6,750	....	....	......	....
Yellow Pine....	160,000	27.97	4,475	....	....	......	....	160,000	100	27.97	4,475
Redwood	85,000	40.00	3,400	....	....	......	....	85,000	100	40.00	3,400
Gum	90,000	34.83	3,135	....	....	......	....	90,000	100	34.83	3,135
Mahogany	35,000	81.43	2,850	....	....	......	....	35,000	100	81.43	2,850
Douglas Fir ...	55,000	46.45	2,555	....	....	......	....	55,000	100	46.45	2,555
Hickory	26,000	70.38	1,830	....	....	......	....	26,000	100	70.38	1,830
Walnut	10,000	75.00	750	....	....	......	....	10,000	100	75.00	750
Butternut	10,000	25.00	250	10,000	100	25.00	250	....	....	......	....
Total	34,404,000	$25.87	$890,121	22,219,000	65	$18.96	$421,378	12,185,000	35	$38.47	$468,743

WOOD MANUFACTURERS

Below is a list of Wisconsin manufacturers who supplied data on which this report is based. The names are grouped by industries. If a name appears under more than one industry, it indicates that the firm manufactures more than one commodity.

Agricultural Implements

Eagle Mfg. Co.	Appleton
Beaver Dam Mfg. Co.	Beaver Dam
J. S. Rowell Mfg. Co.	Beaver Dam
J. Thompson and Sons Mfg. Co.	Beloit
Northwestern Steel and Iron Works	Eau Claire
Dallman and Cooper Supply Co.	Fond du Lac
Kent Mfg. Co.	Fort Atkinson
George H. Pounder	Fort Atkinson
Hartford Plow Co.	Hartford
Van Brunt Mfg. Co.	Horicon
Janesville Machine Co.	Janesville
Frank Hamachek	Kewaunee
La Crosse Plow Co.	La Crosse
American Plow Co.	Madison
Fuller and Johnson Mfg. Co.	Madison
Smalley Mfg. Co.	Manitowoc
A. W. Stevens Co.	Marinette
I. B. Rowell Co.	Menomonee Falls
Hirsch Bros.	Milwaukee
International Harvester Co.	Milwaukee
Milwaukee Hay Tool Co.	Milwaukee
Rosenthal Corn Husker Co.	Milwaukee
J. I. Case Threshing Machine Co.	Racine
Foster and Williams Mfg. Co.	Racine
S. Freeman and Sons Mfg. Co.	Racine
Johnson and Field Mfg. Co.	Racine
Belle City Mfg. Co.	Racine Junction
Drew Elevated Carrier Co.	Waterloo

Bee Hives and Bee Keepers' Supplies

J. E. Murphy	Berlin
C. E. Bates	Fond du Lac
Marshfield Mfg. Co.	Marshfield
Sheboygan Fruit Box Co.	Sheboygan
G. B. Lewis Co.	Watertown

Boats and Ship Building

N. K. Jones	Delavan
Daniel Kidney and Son	De Pere
Dunphy Boat Mfg. Co.	Eau Claire
Palmer Boat Co.	Fontana
Andrew A. Johnson and Son	Green Bay
J. R. Peterson	La Pointe
William P. Bernard	Madison
H. B. Burger	Manitowoc
Manitowoc Dry Dock Co.	Manitowoc
W. M. Jackson	Marinette
James Larsen	Marinette
Brighton Boat and Supplies Co.	Menasha
C. A. Sorenson	Neenah
George D. Ryan	Oshkosh
Pierce Motor Co.	Racine
Racine Boat Co.	Racine
Shell Lake Boat Co.	Shell Lake
Joseph Harris and Son	Sturgeon Bay
Rieboldt, Wolter and Co.	Sturgeon Bay
R. J. Redmond	Superior
James Jensen	Waupaca
Winneconne Boat Co.	Winneconne

Boxes

Graef Mfg. Co.	Appleton
Standard Mfg. Co.	Appleton
F. G. and C. A. Stanley Co.	Chippewa Falls
De Forest Lumber Co.	De Forest
John H. Kaiser Lumber Co.	Eau Claire
Linderman Box and Veneer Co.	Eau Claire
J. H. Young	Eau Claire

Badger Box and Lumber Co.	Grand Rapids
Green Bay Box and Lumber Co.	Green Bay
Yawkey-Bissell Lumber Co.	Hazelhurst
Dehne and Dehne Mfg. Co.	Hustisford
Fifield Lumber Co.	Janesville
Magee Bros.	Janesville
La Crosse Box Co.	La Crosse
Riverside Box Co.	La Crosse
Brown-Mitcheson Co.	Marinette
Marinette and Menominee Box Co.	Marinette
F. B. Goodrich Lumber Co.	Milton Junction
August C. Beck Co.	Milwaukee
George Hays	Milwaukee
Kieckhefer Box Co.	Milwaukee
Mueller and Sons Co.	Milwaukee
National Box Co.	Milwaukee
S. C. Johnson and Son	Racine
E. A. Butzke	Ripon
Sheboygan Cigar Mold Co.	Sheboygan
Stevens Point Box Co.	Stevens Point
Kinfield and Lamoreaux	Washburn

CHAIRS

Appleton Chair Co.	Appleton
Chippewa Falls Chair Co.	Chippewa Falls
North Western Mfg. Co.	Fort Atkinson
Northern Chair Co.	Grafton
Wisconsin Mfg. Co.	Jefferson
Milwaukee Chair Co.	Milwaukee
Milwaukee County House of Correction	Milwaukee
Buckstaff-Edwards Co.	Oshkosh
A. W. Schram and Sons Co.	Oshkosh
Plymouth Chair Co.	Plymouth
Wisconsin Chair Co.	Port Washington
American Mfg. Co.	Sheboygan
Crocker Chair Co.	Sheboygan
Phoenix Chair Co.	Sheboygan
Sheboygan Chair Co.	Sheboygan
George Spratt and Co.	Sheboygan
Richardson Bros.	Sheboygan Falls
Webster Mfg. Co.	Superior

CHURCH AND SCHOOL FURNISHINGS

Fond du Lac Church Furnishing Co.	Fond du Lac
Kewaunee Mfg. Co.	Kewaunee
E. Hackner	La Crosse
American Seating Co.	Manitowoc
Marion Furniture Mfg. Co.	Marion
Hann-Wangerin-Weickhardt Co.	Milwaukee
Milwaukee Seating Co.	Milwaukee
Ossit Bros.	Milwaukee
American Furniture Co.	Racine
Felix Kamrowski	Stevens Point
Wausau Fixture and Furniture Co.	Wausau

CIGAR BOXES

Thoroughgood and Co.	Janesville
Drost Box Mfg. Co.	Manitowoc
Schnorr Bros.	Manitowoc
C. B. Henschel Mfg. Co.	Milwaukee
Mueller and Son Co.	Milwaukee
M. M. Kitz and Sons	Oshkosh
Sheboygan Cigar Mold Co.	Sheboygan

COFFINS AND CASKETS

Northern Casket Co.	Fond du Lac
E. C. Manger and Sons Co.	Green Bay
Cream City Casket Co.	Milwaukee
Milwaukee Casket Co.	Milwaukee
Buckstaff-Edwards Co.	Oshkosh
Edwards-Ihrig Co.	Oshkosh
Crescent Casket Co.	Pewaukee
Felix Kamrowski	Stevens Point

EXCELSIOR

Marshfield Bedding Co.	Marshfield
Cream City Bedding Co.	Milwaukee
A. C. Parfrey	Richland Center
Excelsior Wrapper Co.	Sheboygan

FURNITURE

Northwood Furniture Co.	Chippewa Falls
Pioneer Furniture Co.	Eau Claire
Fond du Lac Table Mfg. Co.	Fond du Lac
Winnebago Furniture Mfg. Co.	Fond du Lac
Wisconsin Cabinet Co.	Fond du Lac
Barth Bros. Mfg. Co.	Port Washington
Grand Rapids Table Co.	Grand Rapids
Oberbeck Bros. Mfg. Co.	Grand Rapids
Automatic File and Index Co.	Green Bay
Green Bay Mfg. Co.	Green Bay
Hanson Furniture Co.	Janesville
Union Upholstering Co.	Jefferson
Peters Furniture Co.	Juneau
Kenosha Crib Co.	Kenosha
Simmons Mfg. Co.	Kenosha
Kiel Furniture Co.	Kiel
Lena Furniture Works	Lena
Upham Mfg. Co.	Marshfield
Conway Veneered Door and Mantel Co.	Milwaukee
Cream City Bedding Co.	Milwaukee
Ellis Lumber Co.	Milwaukee
Milwaukee Parlor Frame Co.	Milwaukee
Milwaukee Woven Wire Works	Milwaukee
Northwestern Furniture Co.	Milwaukee
J. E. Rilling and Co.	Milwaukee
Paul Weise Co.	Milwaukee
Wisconsin Furniture Co.	Milwaukee
Wollaeger Mfg. Co.	Milwaukee
Morris Mfg. Co.	Morris
Muscoda Mfg. Co.	Muscoda
Wisconsin Furniture Mfg. Co.	Neillsville
Schneider Furniture Co.	North Milwaukee
Banderob-Chase Co.	Oshkosh
Edwards-Ihrig Co.	Oshkosh
Oshkosh Bedding and Couch Co.	Oshkosh
Plymouth Furniture Co.	Plymouth
Plymouth Parlor Frame Co.	Plymouth
Schwartz Mfg. Co.	Plymouth
Gold Medal Camp Furniture Mfg. Co.	Racine
Racine Mfg. Co.	Racine

Advance Furniture Co.	Sheboygan
American Parlor Frame Co.	Sheboygan
Art Furniture Co.	Sheboygan
Joerns Bros. Mfg. Co.	Sheboygan
Northern Furniture Co.	Sheboygan
H. G. Mueller Lumber and Mfg. Co.	Sheboygan
Sheboygan Couch Co.	Sheboygan
Sheboygan Novelty Co.	Sheboygan
Automatic Cradle Co.	Stevens Point
Coye Furniture Co.	Stevens Point
Watertown Table Slide Co.	Watertown

HANDLES

Oak Grove Handle Co.	Cameron
Sterling Wheelbarrow Co.	Milwaukee
Oshkosh Logging Tool Co.	Oshkosh
Withee Mfg. Co.	Withee

MUSICAL INSTRUMENTS

Gustav C. Foerster	Milwaukee
B. K. Korik	Milwaukee
William Schuelke Organ Co.	Milwaukee
Smith, Barnes and Strahber Co.	North Milwaukee
S. W. Miller Piano Co.	Sheboygan

REFRIGERATORS

Wisconsin Refrigerator Co.	Eau Claire
Gurney Refrigerator Co.	Fond du Lac
Cornillie Bros.	Milwaukee
Rhinelander Refrigerator Co.	Rhinelander

PULP

Appleton Paper and Pulp Co.	Appleton
Combined Locks Paper Co.	Appleton
Interlake Pulp and Paper Co.	Appleton
Kimberly-Clark Co.	Appleton
Patten Paper Co., Ltd.	Appleton

Riverside Fibre and Paper Co.	Appleton
Wausau Paper Mills Co.	Brokaw
Crivitz Pulp and Paper Co.	Crivitz
Dells Paper and Pulp Co.	Eau Claire
Centralia Pulp and Water Power Co.	Grand Rapids
Consolidated Water Power and Paper Co.	Grand Rapids
Grand Rapids Pulp and Paper Co.	Grand Rapids
Green Bay Paper and Fibre Co.	Green Bay
Northern Paper Mills	Green Bay
Kaukauna Fibre Co.	Kaukauna
Outagamie Paper Co.	Kaukauna
Thilmany Pulp and Paper Co.	Kaukauna
Marinette and Menominee Paper Co.	Marinette
Island Paper Co.	Menasha
Menasha Paper Co.	Menasha
Grandfather Falls Paper Co.	Merrill
Lindauer Pulp and Mfg. Co.	Merrill
Falls Mfg. Co.	Oconto Falls
Union Mfg. Co.	Oconto Falls
Flambeau Paper Co.	Park Falls
Nekoosa-Edwards Paper Co.	Port Edwards
Rhinelander Paper Co.	Rhinelander
Wolf River Paper and Fibre Co.	Shawano
Wisconsin River Paper and Pulp Co.	Stevens Point
Anson-Eldred Co.	Stiles
Tomahawk Pulp and Paper Co.	Tomahawk

SASH, DOORS AND BLINDS, INTERIOR AND EXTERIOR FINISH

Graef Mfg. Co.	Appleton
Standard Mfg. Co.	Appleton
Scott-Taylor Co.	Ashland
Northern Wisconsin Mfg. Co.	Chippewa Falls
F. G. and C. A. Stanley Co.	Chippewa Falls
E. M. Fish Co.	Eau Claire
Hoeppner-Bartlett Co.	Eau Claire
O. C. Steenberg Co.	Fond du Lac
Badger Box and Lumber Co.	Grand Rapids
East River Planing Mill Co.	Green Bay
Green Bay Planing Mill Co.	Green Bay
Anderson Lumber Co.	Hudson

Fernhobz Lumber Co.	Jefferson
Kaukauna Lumber and Mfg. Co.	Kaukauna
Gross and Neergaard	Kenosha
Segelke and Kohlhaus Mfg. Co.	La Crosse
H. A. Tagatz	Lena
Miller Sash and Door Co.	Marinette
Weidemann and Linden	Marinette
A. H. Stange Co.	Merrill
Badger Sash and Door Co.	Milwaukee
Cream City Sash and Door Co.	Milwaukee
Gruhl Sash and Door Co.	Milwaukee
Interior Wood Work Co.	Milwaukee
Meckelburg Sash and Door Co.	Milwaukee
Pederson and Grobben	Milwaukee
Phoenix Mfg. Co.	Milwaukee
George Poppert Mfg. Co.	Milwaukee
Rockwell Mfg. Co.	Milwaukee
Wm. H. Schmidt Sons and Co.	Milwaukee
West Side Mfg. Co.	Milwaukee
Willer Manufacturing Co.	Milwaukee
Foster-Lothman Mills	Oshkosh
Gould Mfg. Co.	Oshkosh
R. McMillen Co.	Oshkosh
Morgan Company	Oshkosh
Paine Lumber Co.	Oshkosh
Radford Bros. Co.	Oshkosh
R. R. Starkweather Co.	Oshkosh
Thos. Driver and Sons Mfg. Co.	Racine
Weber-Bahnemann Co.	Racine
Rice Lake Mfg. Co.	Rice Lake
Sparta Sash and Door Co.	Sparta
Vetter Mfg. Co.	Stevens Point
Joos and Osmundsen	Superior
Wilbur Lumber Co.	Waukesha
Curtis and Yale Co.	Wausau
Wausau Fixture and Furniture Co.	Wausau
Werheim Mfg. Co.	Wausau
Radcliffe Mfg. Co.	West Allis

TOYS, WAGONS AND LAWN FURNITURE

Appleton Toy and Furniture Co.	Appleton
Marshfield Bedding Co.	Marshfield
Gold Medal Camp Furniture Mfg. Co.	Racine
Garton Toy Co.	Sheboygan
Thomas Coaster Toy Co.	Sheboygan
White Wagon Works	Sheboygan Falls

TRUNKS

Eau Claire Trunk Co.	Eau Claire
Abel and Bach Co.	Milwaukee
George Burroughs and Sons	Milwaukee
Milwaukee Trunk and Bag Co.	Milwaukee
Romadka Bros. Co.	Milwaukee
Western Grip and Trunk Co.	Milwaukee
Oshkosh Trunk Co.	Oshkosh
Schmit Bros. Trunk Co.	Oshkosh
Hartman Trunk Co.	Racine
Racine Trunk Co.	Racine
M. M. Secor Trunk Co.	Racine

OFFICE, STORE AND BANK FIXTURES, CABINET WORK

Standard Mfg. Co.	Appleton
Eau Claire Porch Works	Eau Claire
Phoenix Furniture Co.	Eau Claire
Green Bay Show Case Works	Green Bay
Ori J. Sorenson	La Crosse
Marion Furniture Mfg. Co.	Marion
Upham Mfg. Co.	Marshfield
S. Birkenwald Co.	Milwaukee
Hugo Esche	Milwaukee
Matthew Bros. Mfg. Co.	Milwaukee
Northwestern Furniture Co.	Milwaukee
P. J. Rinzel	Milwaukee
Louis Ritter	Milwaukee
Segelke and Kohlhaus Mfg. Co.	Milwaukee
A. H. Adams	Oshkosh
Oshkosh Grill and Novelty Works	Oshkosh
Robert Brand and Sons Co.	Oshkosh

M. Winter Lumber Co.	Sheboygan
Felix Kamrowski	Stevens Point
Wausau Fixture and Furniture Co.	Wausau

VEHICLES AND VEHICLE STOCK

J. H. Marston	Appleton
Athens Implement and Mfg. Co.	Athens
Ruka Bros. Mfg. Co., Ltd.	Boscobel
Felber and Misfeldt	Chippewa Falls
E. G. Pannier	Chippewa Falls
Crandon Mfg. Co.	Crandon
George W. Price	Crandon
William Bonell	Eau Claire
Peter Girnau and Sons Co.	Eau Claire
Mouldenhauer and Damm	Eau Claire
Fond du Lac Implement Co.	Fond du Lac
B. F. and H. L. Sweet Co.	Fond du Lac
North Western Mfg. Co.	Fort Atkinson
William J. Touton	Fort Atkinson
F. MacKinney Mfg. Co.	Grand Rapids
Green Bay Carriage and Wagon Co.	Green Bay
Western Wood Bending Co.	Hilbert
Janesville Carriage Works	Janesville
Nicholas Pirsch Co.	Kenosha
Smith Mfg. Co.	La Crosse
F. Voight, est.	La Crosse
Madison Carriage Co.	Madison
Wisconsin Wagon Works	Madison
Oscillating Sleigh Co.	Menomonie
Wesle Bros.	Medford
Charles Albrecht Co.	Milwaukee
George Grede and Bro. Co.	Milwaukee
Haegele and Altman	Milwaukee
Joseph Heinl and Sons	Milwaukee
Milwaukee Spoke and Bending Co.	Milwaukee
Gustav Raetz	Milwaukee
Shadboldt and Boyd Iron Co.	Milwaukee
Skubal and Schauer	Milwaukee
A. Lanz and Sons	Monroe
Miller Mfg. Co.	Monroe
H. L. Babler	Monticello
Johnson Mfg. Co.	Neillsville

J. L. Clark Carriage Co.	Oshkosh
John Mathwog	Oshkosh
A. Streich and Bro. Co.	Oshkosh
Gustave Streich	Oshkosh
Bain Wagon Works	Racine
Fish Bros. Wagon Works	Racine
Jacob Hilt	Racine
Mitchell and Lewis Co., Ltd.	Racine
Racine Sattley Co.	Racine
Randolph Wagon Works	Randolph
E. A. Butzke	Ripon
A. W. Lund	River Falls
Krueger and Stolzenberg	Sheboygan
Mandt Wagon Works	Stoughton
Stoughton Wagon Works	Stoughton
James D. Casey	Watertown
J. S. Morris Carriage Co.	Waupun
Schmidt and Stork	West Bend
A. H. Marksie	Whitewater
Weyher Mfg. Co.	Whitewater
Charles Bradley and Son	Winneconne

WINDMILLS, TANKS AND SILOS

Standard Mfg. Co.	Appleton
Klatt Bros.	Beaver Dam
Fairbanks-Morse Mfg. Co.	Beloit
De Forest Lumber Co.	De Forest
John B. Reader	Delavan
Baker Mfg. Co.	Evansville
Burton and Bleasdale	Janesville
Smalley Mfg. Co.	Manitowoc
Dunck Tank Works	Milwaukee
Oshkosh Cistern and Tank Co.	Oshkosh
Duplex Mfg. Co.	Superior
Althouse-Wheeler Co.	Waupun
Breyer Bros., Whiting and Co.	Waupun

WOODENWARE

Henry Grimm, Jr.	Algoma
English Mfg. Co.	Antigo
Klatt Bros.	Beaver Dam
J. E. Murphy	Berlin
Charles Hagen	Black Creek
Brillion Wooden Ware Co.	Brillion
Badger Basket and Veneer Co.	Burlington
Campbellsport Woodenware Co.	Campbellsport
W. N. Killen	Cato
Harrington Package Co.	Crandon
Wisconsin Fruit Package Co.	Crandon
Barth Bros. Mfg. Co.	Port Washington
H. E. Cooley	Fredonia
Great Northern Pail Co.	Gillett
Green Bay Mfg. Co.	Green Bay
Hilbert Woodenware Co.	Hilbert
Albrecht Mfg. Co.	Kewaunee
Kiel Wooden Ware Co.	Kiel
Menasha Woodenware Co.	Menasha
Merrill Woodenware Co.	Merrill
Plymouth Box Mfg. Co.	Plymouth
Keller and Martner	Prairie du Chien
Racine Trunk Co.	Racine
John F. Reul	Rice Lake
A. C. Parfrey	Richland Center
A. H. Lambrecht	Rubicon
Dillingham Mfg. Co.	Sheboygan
H. G. Mueller Lumber and Mfg. Co.	Sheboygan
Sheboygan Fruit Box Co.	Sheboygan
Richardson Bros.	Sheboygan Falls
J. F. Conant Mfg. Co.	South Milwaukee
Stanley Woodenware Co.	Stanley
J. M. Ellenbecker	Sturgeon Bay
Two Rivers Woodenware Co.	Two Rivers
Unity Mfg. Co.	Unity
Neupert and Budig	Waterloo
G. B. Lewis Co.	Watertown
Wausau Novelty Co.	Wausau
Koch Mfg. Co.	Woodland

MISCELLANEOUS

Plumbers Woodwork Co.	Algoma
Willson Mfg. Co.	Appleton
N. B. Gaston's Sons Co.	Beloit
Cornish, Curtis and Greene Mfg. Co.	Fort Atkinson
J. J. Lopitsch	Green Bay
Hough Shade Corporation	Janesville
Kaukauna Lumber and Mfg. Co.	Kaukauna
Peter Pirsch and Co.	Kenosha
R. Alden and Sons	Ladysmith
Fargo Creamery Supply House	Lake Mills
Menasha Mfg. Co.	Menasha
Menasha Wood Split Pulley Co.	Menasha
Allis-Chalmers Co.	Milwaukee
Brodesser Elevator Mfg. Co.	Milwaukee
C. R. Gether Co.	Milwaukee
George Hays	Milwaukee
Willer Mfg. Co.	Milwaukee
Diamond Match Co.	Oshkosh
John R. Davis Lumber Co.	Phillips
American Brooder Co.	Racine
Domestic Mfg. Co.	Racine
Racine Mfg. Co.	Racine
Sheboygan Cigar Mold Co.	Sheboygan
Hamilton Mfg. Co.	Two Rivers
Wisconsin Textile Mfg. Co.	Two Rivers
Waukesha Mfg. Co.	Waukesha

USES BY SPECIES.

The manufacturers in Wisconsin report the use of 40 different woods. The principal purposes for which each is employed are shown in the list which follows:

Ash

Agricultural implements
Auto bodies
Baskets
Boats
Butter tubs
Boxes
Cabinet work
Camp furniture
Carriages
Chairs
Cheese boxes
Church fixtures
Coffins
Cores for veneer
Desks
Extension ladders
Extension tables
Filing cabinets
Furniture
Grilles
Heading
Hoops
Interior finish
Interior woodwork
Oars
Office fixtures
Paper mill supplies
Piano benches and stools
Piano backs
Panels
Pipe organs
Refrigerators
School furniture
Shipbuilding
Sucker rods
Stair work
Staves
Store fixtures
Tables
Toys
Trunks
Wagons
Windmill parts
Woodenware.

Birch

Agricultural implements
Auto bodies
Blinds
Baskets
Boxes
Boats
Bread boards
Boys' wagons
Cabinets
Cheese boxes

Chairs
Cabinet work
Camp furniture
Coffins
Carriages
Church furniture
Clothes racks
Core stock for veneers
Cupboards
Desks
Dairy goods
Dowels
Doors
Dishes
Egg cases
Furniture
Furniture frames
Fruit boxes and baskets
Fish kits
Grilles
Hubs
Heading
Interior finish
Interior woodwork
Kegs
Kitchen cabinets
Lap boards
Meat boards
Music cabinets
Molding
Organ cases
Organ pipes
Office fixtures
Oil can jackets
Piano actions
Piano stools and benches
Panels
Pails
Paper mill supplies
Rails
Refrigerators
Sash
Store fixtures
Show cases
Shelving
Spools
Scales
Sleds
Tabourettes
Tables
Tubs
Toys
Wagons
Wash benches
Woodenware.

BUTTERNUT

Boats
Boxes
Cheese boxes
Church furniture
Desks
Furniture
Heading
Interior finish
Interior woodwork
Office fixtures
Printers' supplies
Woodenware.

BALSAM

Boxes
Sulphite fibre

BASSWOOD

Agricultural implements
Baskets
Bee boxes and hives
Boats
Book shelving
Boxes
Burial boxes
Bread boards
Cabinet work
Carriages
Caskets
Carving boards
Casings
Corn shellers
Chairs
Cheese boxes
Church furniture
Cigar boxes
Clothes racks
Desks
Extension tables
Egg cases
Excelsior
Fruit boxes and baskets
Furniture
Fish kits
Flour mill machinery
Heading
Horse powers
Honey sections
Interior finish
Interior woodwork
Ironing boards
Kitchen cabinets
Lap boards
Looking glass backs
Musical instruments
Moldings
Office fixtures
Pails
Poultry boxes
Porch shades
Pulleys
Plates
Printers' supplies
Pipe organs
Refrigerators
Sash, doors, blinds
Scales
Shoe racks
Show cases
Shirtwaist boxes
Store fixtures
Spools
Saw frames
Ship building
Tables
Tabourettes
Toys
Trunks
Tobacco boxes
Tubs, small
Vehicles
Wagons
Wash benches
Windmills
Woodenware.

BEECH

Agricultural implements
Boxes
Chairs
Church furniture
Furniture
Horse powers
Printers' supplies
Windmills
Wagons.

CEDAR

Boats
Cigar boxes
Store fixtures
Tubs
Woodenware.

RED CEDAR

Boats
Doors
Interior finish
Sash
Windmills.

SPANISH CEDAR

Cigar boxes.

CHERRY

Boats
Furniture
Interior woodwork
Office furniture
Office fixtures
Printers' supplies
Store fixtures.

CHESTNUT

Caskets
Church furniture
Cores for veneers
Doors
Furniture
Interior finish
Office fixtures
Parlor frames
Piano parts.

CIRCASSIAN WALNUT

Furniture
Interior woodwork.

COTTONWOOD

Agricultural implements
Boxes
Carriages
Egg cases
Furniture
Tables
Trunks
Wagons

CYPRESS

Boats
Boxes
Brewery vats
Cisterns
Dairy goods
Doors
Grilles
Interior finish

Moldings
Office fixtures
Pails
Refrigerators
Silos
Staves
Shipbuilding
Store fixtures
Sash
Tanks
Tubs
Windmills

Douglas Fir

Balustrades
Boats
Churns
Columns
Cisterns
Extension ladders
Exterior finish
Office fixtures
Porch work
Stair work
Silos
Sash
Shipbuilding
Staves
Store fixtures
Tanks
Vehicle poles
Wagons.

Elm

Agricultural implements
Auto bodies
Axles
Boats
Baskets
Boys' wagons and sleds
Boxes
Bread box slats
Cabinets
Cabinet work
Camp furniture
Chairs
Cheese boxes
Children's chairs
Church furniture
Coffins
Cradles
Croquet sets
Desks
Egg cases
Furniture
Furniture frames
Grain measures
Hoops
Hubs
Heading
Horse powers
Interior finish
Kegs
Kits
Lawn furniture
Oil can jackets
Office fixtures
Pails
Printers' supplies
Paper mill supplies
Pianos
Pipe organs
Refrigerators
Sleds
Store fixtures
Shipbuilding
Tubs
Toys

- Tobacco pails
- Trunks
- Tables
- Tool chests
- Wheelbarrows
- Wagons
- Woodenware.

ENGLISH OAK

- Furniture
- Interior woodwork.

FRENCH WALNUT

- Furniture
- Interior woodwork.

GUM

- Automobile bodies
- Agricultural implements
- Bread box slats
- Book shelves
- Cabinets
- Chairs
- Cigar boxes
- Cupboards
- Cores for veneering
- Extension tables
- Furniture
- Interior woodwork
- Molding
- Office fixtures
- Panels
- Pianos
- Store fixtures
- Tables
- Wagons
- Weather strips

HEMLOCK

- Agricultural implements
- Boats
- Boxes
- Burial boxes
- Cribs
- Cores for veneering
- Dairy goods
- Folding chairs
- Framing
- Refrigerators
- Silos
- Sulphite fibre
- Tobacco cases.

HICKORY

- Agricultural implements
- Carriages
- Printers' materials
- Trunks
- Vehicle stock
- Wagons.

JACK PINE

- Boxes
- Pulp
- Pails
- Sash
- Staves.

MAHOGANY

Automobile bodies
Boats
Chairs
Church furniture
Doors
Extension tables
Furniture
Interior finish
Interior woodwork
Musical instruments
Molding
Office fixtures
Piano cases
Piano benches and stools
Patterns
Printers' supplies
Store fixtures.

MAPLE

Agricultural implements
Automobile bodies
Baskets
Broom handles
Boxes
Bread boards
Boys' wagons
Bob sleds
Baseball bats
Butchers' blocks
Cabinets
Chairs
Cutting blocks
Cant hook handles
Cheese boxes
Clothes racks
Cogs
Clothes mangle rolls
Cutting benches
Cigar boards
Croquet sets
Camp furniture
Circular saw machines
Church furniture
Doors
Desks
Drag saw machines
Egg cases
Filing cabinets
Furniture frames
Flour mill machinery
Horse powers
Heading
House moving rollers
Handles
Interior finish
Lap boards
Logging tools
Musical instruments
Music cabinets
Mattress frames
Office fixtures
Piano stools
Piano parts
Pulleys
Paper mill supplies
Printers' supplies
Refrigerators
Scales
Sectional blocks
Stair treads
Sleds
Shipbuilding
Store fixtures
Sash
Tabourettes

- Turnery
- Tables
- Toys
- Tool chests
- Vehicle stock
- Wash benches and boards
- Wagons
- Windmills
- Wheelbarrow handles
- Woodenware
- Wringers.

Norway Pine

- Agricultural implements
- Balusters
- Boxes
- Extension ladders
- Interior finish
- Molding
- Pump rods
- Rails
- Sash
- Tanks
- Windmills.

Oak

- Agricultural implements
- Boats
- Blinds
- Burial boxes
- Brewery vats
- Caskets
- Chairs
- Casings
- Cabinet work
- Church furniture
- Carriages
- Chairs
- Extension tables
- Furniture
- Furniture frames
- Filing cabinets
- Grilles
- Handles
- Interior finish
- Interior woodwork
- Ice boxes
- Mission furniture
- Moldings
- Music cabinets
- Organ cases
- Office fixtures
- Office furniture
- Partitions
- Paper mill supplies
- Panels
- Piano cases
- Piano stools and benches
- Printers' materials
- Refrigerators
- Store fixtures
- Stairs
- Show cases
- Sleighs
- Shelving
- Shipbuilding
- Tabourettes
- Tanks
- Tables
- Vehicle stock
- Wagons
- Wire reels
- Windmills
- Woodenware.

Quartered Oak

- Cabinet work
- Chairs
- Casings
- Church furniture
- Doors
- Desks
- Furniture
- Filing cabinets
- Music cabinets
- Moldings
- Office furniture
- Office fixtures
- Organ cases
- Piano cases
- Piano benches
- Store fixtures.

Poplar

- Agricultural implements
- Automobile bodies
- Boxes
- Cheese boxes
- Camp furniture
- Cigar boxes
- Casings
- Carriages
- Dairy goods
- Doors
- Excelsior
- Flour mill machinery
- Ground wood pulp
- Interior woodwork
- Moldings
- Musical instruments
- Piano cases
- Piano benches
- Printers' materials
- Wagons.

Redwood

- Boats
- Incubators.

Rosewood

- Interior woodwork
- Musical instruments.

Spruce

- Boxes
- Carriages
- Ground wood pulp
- Oars
- Piano parts
- Sulphite fibre
- Sash
- Spars
- Wagons.

Western Spruce

Columns
Doors
Exterior finish
Interior finish
Office fixtures
Sash
Store fixtures
Silos
Tanks
Windmills.

Sycamore

Agricultural implements
Refrigerators.

Tamarack

Boxes
Boats
Cheese boxes
Heading
Poles
Silos
Shipbuilding
Tubs.

Tupelo Gum

Cigar boxes.

Walnut

Boats
Cabinet work
Church furniture
Furniture
Interior finish
Musical instruments
Office furniture
Piano cases
Piano benches
Printers' materials
Store fixtures
Tables.

Western Pine

Blinds
Burial boxes
Doors
Gable ornaments
Matches
Moldings
Sash.